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THE PN HANGOR-CLASS SUBMARINE:

REINFORCING PAKISTAN'S NAVAL PROWESS



Interaction

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Contents

1	Redefining global strategy: Insights from the 11th Beijing Xiangshan Forum	Editorial	02
2	RFI Commemorates Youm e Fat'h e Mubeen (Defense Day)		05
3	Commemorating Youm e Fat'h e Mubeen: Pakistan - India war of 1965	Air Commodore Zahid ul Hassan SI(M) TI(M) (R)	08
4	Analytical comparison of US and China's technological race: which side holds more merit?	Nusrat Mirza	13
5	One year of the Israel - Palestine Conflict	M Aamir Sultan	15
6	The PN Hangor-Class Submarine: Reinforcing Pakistan's Naval prowess	Mirza Kashif Baig	20
7	Pakistan Corner: Pakistan's early years: from partition to survival (1947-1949)	Interaction Team	24
8	Cultural Corner: The Akkadian Empire	Interaction Team	29
9	The National Institute For Laser and Optronics (NILOP)	Syed Samiullah	32
10	The role of cyber warfare in Shaping modern military strategy	Khushboo Fareed Khan Ghouri	33
11	Legal ramifications of covert operations: the 2024 pager explosions in Lebanon and International Law	Wajeeha Najam	36
12	Iran-pakistan Gas Pipeline, at what cost?	Dr. S. Bushra Batool	38
13	Pakistan's Security Dilemma in abandonment and entrapment	Sanullah	41
14	A Pakistani daughter on getting to know IAF Mig Pilot who shot down Her Father's F-104		44

EDITORIAL

REDEFINING GLOBAL STRATEGY:

INSIGHTS FROM THE 11TH BEIJING XIANGSHAN FORUM



■ The 11th Beijing Xiangshan Forum, held recently, marked a pivotal moment in global strategic affairs. With participation from nearly 100 countries, including notable figures like Pakistan's Chairman Joint Chiefs of Staff Committee, Gen. Sahir Shamshad Mirza, the forum underscored a transformative approach to international relations and power dynamics.

A PLATFORM FOR EQUAL VOICES

■ Traditionally, international forums often allocate speaking time based on a country's economic or military prowess, inadvertently favoring larger and more powerful nations. The Xiangshan Forum broke this mold by ensuring equal speaking time for all representatives, regardless of their country's size or strength.

■ This egalitarian approach democratizes the discourse and fosters a more inclusive and balanced dialogue among nations. By giving each country an equal platform, the forum emphasizes the importance of every nation's voice in shaping global strategies and policies.

FROM CHESS TO XIANGQI: A NEW STRATEGIC PARADIGM

■ One of the standout presentations at the forum was China's introduction of a novel strategic concept. Traditionally, power politics has been likened to a game of chess—strategic, zero-sum, and confined to a limited playing field with only one victor.

However, China proposes viewing international relations through the lens of Xiangqi, or Chinese chess. Unlike chess, Xiangqi is played on a larger board with more pieces, allowing for multiple winners and a more dynamic interplay of strategies.

■ This metaphor reflects China's approach to global strategy, which aims not to outmaneuver opponents single-handedly but to create a collaborative environment with multiple beneficiaries. By expanding the strategic "board," China envisions a world where diverse nations can thrive together, reducing the adversarial nature of traditional



power politics.

STRATEGIC ALLIANCES AND ECONOMIC BLOCKS

China's strategic vision extends beyond theoretical frameworks. The country has meticulously identified its adversaries primarily the US, Europe, India, and other Western allies and developed comprehensive strategies to counter their influence. Central to this strategy is establishing more than seven hundred bases worldwide, enhancing America's global military presence and logistical capabilities. China has focused on the Global South, forming small economic blocs and creating robust security systems to protect these alliances.

The formation of BRICS and the Shanghai Cooperation Organization (SCO) exemplifies China's efforts to build alternative international institutions that rival established entities like NATO. BRICS aims to support China's banking system and foster economic cooperation among emerging economies.

At the same time, the SCO focuses on maintaining peace and stability within economic zones, offering a counterbalance to NATO's influence. These organizations are designed to create multiple winners, especially within the Global South, aligning with China's Xiangqi-inspired strategy.

DEFENSE SYSTEMS AND ECONOMIC STABILITY

China is steadily developing various unique defense systems tailored to different strategic scenarios. These systems are not just reactive measures but proactive tools designed to secure China's interests and protect its economic blocs. By investing in diverse defense technologies, China ensures that it remains prepared to address various



threats, from cyber warfare to conventional military confrontations.

Moreover, China's emphasis on economic stability is evident in its approach to international aid and investment. By providing financial assistance to Global South countries, China strengthens its economic ties and dispels allegations of neo-colonialism.

Initiatives like the Belt and Road Initiative (BRI) have been instrumental in building infrastructure and fostering economic growth in partner nations, thereby securing markets for Chinese products and mitigating potential economic slowdowns.

COMMITMENT TO PEACE AND STABILITY

Despite the strategic maneuvers, China consistently emphasizes its commitment to peaceful resolutions and global stability. At the forum, China articulated that its actions are not aimed at antagonizing other nations but at creating a harmonious international environment where all partners are treated equally. This stance is further reinforced by China's humanitarian aid and development projects, which aim to uplift economies without imposing political control.

A significant moment at the forum was the participation of Gen. Sahir Shamshad Mirza, who raised concerns about India's role in the region, particularly in the Indian

Ocean. His remarks highlighted the ongoing geopolitical tensions and the need for balanced power dynamics to ensure regional stability.

■ Gen. Mirza's emphasis on Pakistan's commitment to peace and stability underscores the nation's strategic initiatives aimed at maintaining equilibrium in a multipolar world. Notably, Pakistan's establishment of the Special Naval Task Force (TF-88) in December 2016, a move attended by all chiefs of Pakistan's armed forces and the Chairman Rabita Forum International, signifies Pakistan's intent to maintain sovereignty over Gwadar without becoming a base for external powers, including China.

IMPLICATIONS FOR GLOBAL STRATEGY

■ The strategies unveiled at the Xiangshan Forum signal a significant shift in global power dynamics. China's Xiangqi-inspired approach promotes a multipolar world where collaboration and mutual benefit take precedence over zero-sum competition.

■ This paradigm encourages countries to engage in cooperative ventures, fostering economic interdependence and collective security. However, the success of this approach hinges on the willingness of other nations to embrace multipolarity and participate in equitable partnerships. The challenge lies in balancing national interests with collective goals, ensuring that strategic alliances do not become avenues for dominance but rather platforms for shared prosperity.

THE PATH FORWARD: EMBRACING MULTIPOLARITY

■ As the global landscape becomes increasingly interconnected, the need for inclusive and cooperative strategies is

paramount. The 11th Beijing Xiangshan Forum exemplifies how strategic forums can evolve to reflect contemporary realities, promoting dialogue and partnership over confrontation. By adopting the principles of Xiangqi, nations can navigate the complexities of modern geopolitics with greater flexibility and resilience.

■ China's efforts to build economic blocs, enhance defense capabilities, and support Global South countries are steps toward a more balanced and prosperous world. As highlighted by Gen. Mirza, Pakistan's strategic stance further complements this vision by ensuring that alliances are based



on mutual respect and sovereignty without compromising national security. Sustaining this momentum requires continuous engagement, transparency, and a genuine commitment to mutual respect among nations.

■ In conclusion, the 11th Beijing Xiangshan Forum not only showcased China's strategic innovations but also provided a glimpse into the future of global strategic affairs. As nations navigate this evolving landscape, the principles of inclusivity, cooperation, and mutual benefit will be paramount in ensuring a peaceful and prosperous world.



RFI COMMEMORATES

YOUM E FAT'H E MUBEEN

(DEFENSE DAY)



Rabita Forum International (RFI) organized a profound discussion session titled "Securing the Future through Peace and Stability." On the occasion of Youm e Fat'h e Mubeen (Defense Day). The event brought together a distinguished panel of speakers, including Lt. Gen. (R) Moinuddin Haider, former Interior Minister and Governor of Sindh, Air Commodore (R) Zahid ul Hassan, Director Research at the Center for International Strategic Studies Sindh (CISSS), Commodore (R) Syed Muhammad Obaidullah, Dr. Uzma Shujaat, Acting Director of the Area Study Center for Europe at the University of Karachi and Syed Samiullah, Head of Research Department at RFI. Ms. Wajeeha Najam, Research Officer at RFI, moderated the program.

Lt. Gen. (R) Moinuddin Haider, the Chief Guest, delivered an in-depth analysis of the historical backdrop to the 1965 war, focusing on India's early resistance to Pakistan's



sovereignty. He recounted India's initial refusal to transfer Pakistan's rightful share of military assets and liquid funds following partition resources that were eventually handed over due to Mahatma Gandhi's intervention. Gen. Haider further emphasized India's longstanding defiance of United Nations resolutions calling for a plebiscite in Kashmir, noting that this diplomatic impasse prompted Pakistan to strengthen its military alliances by joining SEATO and CENTO.

Drawing on his personal experience as a young captain during the war, Lt. Gen. Haider vividly described his role at the Akhnoor front, where he and his comrades engaged the enemy with unwavering determination. He lauded the Pakistan Army's outstanding performance during the war, highlighting how, despite being outnumbered, they fought valiantly and achieved victory by any measure of success.

Air Commodore (R) Zahid ul Hassan highlighted the strategic brilliance of the Pakistan Air Force (PAF) during the conflict. He recounted how Pakistan became increasingly vulnerable following the Sino-Indian War and the U.S. decision to arm India against China. Given India's rigid stance on Kashmir, Pakistan had no choice but to prepare for military confrontation. Air Commodore Hassan highlighted with pride the PAF's dominance, noting that it shot down 35 Indian aircraft, 19 of which were mid-air strikes. He emphasized that Pakistan's air superiority over the entire

battlefront played a decisive role in securing the victory.

Commodore (R) Syed Muhammad Obaidullah explored the achievements of the Pakistan Navy, particularly during Operation Dwarka and Operation Somnath. These successful naval operations not only inflicted significant damage on the Indian Air Force but also dented the morale of the Indian nation. Commodore Obaidullah pointed out that despite Pakistan's naval strength being outnumbered in a 5:1 ratio, the professional expertise of the Pakistani forces and their unshakable faith in Allah allowed them to outshine their adversaries. He also praised the unity of the nation and the international support from countries like Indonesia, Iran, and Malaysia during the war.

Dr. Uzma Shujaat offered a civilian perspective on the challenges of warfare in the 21st century. She highlighted the devastating human toll of modern conflicts, citing that over 60 million people have been displaced





globally due to wars. She emphasized the importance of addressing non-traditional security threats such as Climate change and food insecurity, which are exacerbated by population growth. Dr. Shujaat called for a renewed national character and a stronger connection to the homeland, asserting that such a mindset would be key in tackling both conventional and non-conventional challenges efficiently.

Due to a time constraint, Syed Samiullah graciously opted to forgo his speech, instead dedicating his allotted time to the question-and-answer session, allowing for greater

audience engagement. In contrast, Sadia Raza captivated the audience with her soulful renditions of national songs, evoking memories of the 1965 war and inspiring listeners throughout the event.

The session concluded on a high note with heartfelt gratitude from the Chairman RFI, Nusrat Mirza, followed by the presentation of shields to the distinguished speakers as a token of appreciation. The event was extensively covered by prominent media outlets, including renowned TV channels, newspapers, and the Press Information Department of Sindh.



COMMEMORATING YOUM E FAT'H E MUBEEN PAKISTAN-INDIA WAR OF 1965

NOTE: Presented below is a distilled summary of the insightful discussion led by Air Commodore Zahid ul Hassan SI(M), TI(M), (R) during a seminar organized by Rabita Forum International in commemoration of Defense Day. His discussion, rich with historical insights, underscores the accomplishments that make the Pakistan Air Force a source of national pride. We are pleased to share these highlights for the enrichment of our readers, fostering a deeper appreciation for the PAF's legacy.



Ladies and Gentleman! Assalamo o Alaykom,

I will present a brief overview of the air operations which were undertaken between the PAF and the IAF during the 1965 war. Before proceeding further, it seems prudent to have a brief overview of the strategic regional and global environment that was prevalent before the conflict unfolded.

1 BRIEF OVERVIEW OF THE STRATEGIC ENVIRONMENT

- a. UN resolutions could not force the Indians to hold a free and fair plebiscite in Kashmir.
- b. Post Sino-Indo War of 1962, Indo-

China relations remained strained, while Pakistan gained friendship with China by resolving border disputes.

- c. Pakistan had maintained cordial relations with the Muslim world.
- d. Though Pakistan had maintained a Balance of military power with India, however, in post Sino-Indo war, the US started re-equipping India at a fast pace under a 10-year plan which was viewed as a grave threat to the Kashmir cause.
- e. Despite all diplomatic efforts by Pakistan, deadlock prevailed over Kashmir and India remained undeterred for any resolution.
- f. Considering the upsurge in Kashmir owing to the theft of Holy Relic from Hazratbal in 1963 and the failure of IndoPak talks in 1963-64, Pakistan started looking forward to other means to de-freeze the Kashmir issue.

2. Ladies and Gentleman, under the exuberance of Runn of Kutch huberism, Pakistan opted to use direct force with assumptions that:

- a. The political situation in Kashmir was

conducive to resurrection;

- b. Conflict in Kashmir would remain localized and India would not violate the sanctity of International Border.

3 BEFORE DWELLING UPON THE CONDUCT OF WAR,

Let's have a look at the Politico-Military Aims of both sides:

- a. Pakistan aimed To "De-freeze the Kashmir Issue by fostering insurgency in IIOJK", sensitize the world community and create conditions for the resolution of the dispute without provoking general war.
- b. Whereas, India aimed to maintain the status quo in IIOJK and in case of unacceptable pressure on Kashmir, carry out a thrust across the international border.

4. Coming over to the Operation Gibraltar. Launched on 29 July 1965, the Gibraltar force successfully infiltrated the Cease Fire Line. Owing to inadequate intelligence, logistics, and local support, the Operation failed to create the desired effects and the force had to withdraw. In response, the Indian Army launched an offensive and captured Jura & Bedori Bulges thereby posing a threat to Muzaffarabad.

5 OPERATION GRAND SLAM

On 1st Sept, the Pak Army, sensing a potential threat to Muzaffarabad, launched Operation Grand Slam to choke the Indian jugular vein



i.e. Road Jammu-Akhnur-Naushehra. Operation advanced as planned with Chamb captured on 2nd Sept, however, an abrupt move to change Major General Akhtar Hussain Malik with Major General Yahya resulted in a loss of critical 36-48 hours and shifted the initiative to India. Operation resumed on 5th Sept with the fall of Jaurian, however, with Akhnur fall in the site. Indians attacked across the International Border on 6th Sept in Lahore and Kasur Sectors.

6. Ladies and Gentleman, before dwelling upon the conduct of air ops in the 1965 war, let me begin by saying that:

- a. It is the story of the courage and indomitable spirit of the airmen who stood resolute against a large adversary.
- b. It is a saga of venerable leaders who left an indelible mark in the history books.
- c. It was the outcome of persistent efforts since 1947; when PAF had a handful of pilots and a mere vintage 35 temper aircraft.
- d. Air Marshal Asghar Khan, the first Pakistani C-in-C of PAF transformed the outlook of PAF from a WW II outfit into a modern and well-trained force However,
- e. The PAF command was handed over to Air Marshal Nur Khan in July 1965,



who laid stringent standards of gunnery, skills, and airmanship.

- f. His precise assessment of an inevitable conflict led to a re-assessment of PAF war plans.
- 7.** Ladies and Gentleman, Force comparison of air assets was in gross favor of India especially in terms of quantity as PAF had:
 - a. 149 aircraft arranged in 11 Sqn (100 F-86, 25 B-57, 12 F-104, 12 T-33) while
 - b. IAF had 536 arranged in 30 Sqn (10 Mig-21 (Russ), 118 Hunter (UK), 80 Gnat (UK), 80 Myst (F), 56 Orgn (F), 60 Can (UK), 132 Vamp (UK)).
 - c. PAF had a total of 04 air Bases, three in West Pakistan (Peshawar, Sargodha, Mauripur) and only one in East Pakistan (Tezgaon Dhaka) as compared to.
 - d. IAF which had 11 air Bases arranged in two layers and mutually supportive of each other, 08 around West Pakistan and three around East Pakistan.

Overall IAF had a clear numerical and infrastructural advantage over the PAF. However, the PAF had a highly qualified and experienced fighter crew with a modern and potent combat fleet. Especially, PAF leadership at all tiers was Proactive, visionary, and dynamic while young leaders were fearless, and never deprived of initiative.

8. Ladies and Gentleman, Proceedings of 1965 war can be divided in to four phases.

- a. **OPS DESERT HAWK** - Run of Kutchh area from April-June, 1965
- b. **OPS GIBRALTAR** - commenced on 29 July, resulted in the capture of Jura and Bedori bulges by the Indian Army
- c. **OPS GRANDSLAM** - commenced on 01 Sep, to avoid threat to MZD, to capture Akhnur, and threaten Indian jugular vein.
- d. **ALL-OUT WAR** - commenced on vee hours of 06 Sep and culminated on 23rd Sep 1965 with UN-sponsored ceasefire.

9. Ladies and Gentleman, PAF's Strategy was to Pre-emptively strike and neutralize IAF airfields, infra, and aircraft on the ground and in the air, ensure its survival and prevent attainment of air superiority by IAF, and remain viable and available to support offensive and defensive land operations. It may be pertinent to note that this strategy was so successful and appealing that a similar strategy was copied and adopted by the Israeli Air Force during its war in 1967 against the Arab countries.

Ops Desert Hawk saw little air action by



IAF and PAF: however, an intruding IAF Ouragan aircraft was force-landed by PAF close to Jhangshahi.

10. Ladies and Gentleman, To support Ops Grandslam, PAF was put on red alert on 29 Aug 1965 and started combat air patrols (CAP) over the Chhamb sector on the same day. PAF CNC AM Nur Khan, in a daring and exemplified manner personally flew over the battle zone on 01 September and observing the vulnerability of Pakistan's land forces, increased the number and time of PAF combat air patrols over the Chhamb sector.

As soon as the Pakistan Army reported the attack by the IAF aircraft, PAF CAP in the area; led by daring devil Sqn Ldr Sarfraz Rafiqui was immediately diverted and PAF established its supremacy by shooting down all five IAF Vampire aircraft in air combat in the battle zone. The results of the first engagement were remarkable and had profound effects as it Forced IAF to withdraw its entire fleet of Vampires and Ouragans for the remaining period of the war which amounts to 188 aircraft (35% of total air effort)

From 2nd till 5th September, PAF conducted CAPs; Armed Reconnaissance, and Photo Recce missions in the Akhnur sector and not only enjoyed air superiority but also afforded complete impunity to Pakistan's land forces



against IAF to successfully pursue and achieve their objectives. This was a unique and remarkable achievement in a potentially contested airspace.

11. Ladies and Gentleman, Since the early morning of 6 Sep, the Battle for Lahore was simmering and No 19 Squadron from Peshawar started the onslaught on the advancing Indian Army, Sherman tanks along with other APCs were dealt a severe blow and the Indians were brought to a halt. In this regard, a letter written by then Brig Amjad Choudhry, Artillery Commander of No 4 Corps, to AM Nur Khan reads 'Your very first action in Chhamb left no doubt in our mind that we did not have to worry much about enemy air. The pattern was set there and then. We will never forget that spectacle it lifted our spirits and gave us a flying start.

In a significant development, Indians were so confident of their success that on 06 Sep Gen Choudhary, Indian COAS invited several foreign correspondents, including Mark Tully of the BBC, to the Lahore Gymkhana for a victory drink.

On 06 Sep (0930) 06 Aircraft of 19 Sqn from devastated Indian Army. Gen Lachhman Singh (Indian General Staff) stated in his book 'Missed Opportunities Indo-Pak War 1965' that "It was about 09.30 am, the leading units



lost all its vehicles, guns, and Sherman tanks as the enemy aircraft shot them up for about 15 minutes undeterred by fire from our troops or by IAF. Similarly, Gen Sukhwant Singh also states that "the C.O. of the 13 Jatt battalion ran back with just one sock and one shoe, deserting the battalion. His 2nd in command followed suit and escaped on a bicycle and took refuge in Amritsar."

Similarly, Pushpindar Singh, a top Indian historian confirmed while talking to Air Cdre (then Sqn Ldr) Sajjad Haider that Major Gen Nirindera Parshad, the Div Cdr of 15 Inf Div that was set out for the Lahore Gymkhana, abandoned his two star and flag jeep, instead ended up in Amritsar to be court-martialled later. His jeep was strafed by Sqn Ldr Sajjad Haider.

12. Ladies and Gentleman, on 07 Sep 1965, PAF undertook Pre-emptive strikes against the Indian Air Force Bases and destroyed 13 aircraft at Pathankot, 21 aircraft at Kalaikunda across East Pakistan, 05 at Halwara, and 10 out of 24 aircraft that came to attack Sargodha. This is the same day and same strike in which Sqn Lds MM Alam achieved a singular honor and recorded the destruction of 05 Indian Hunter aircraft in just less than a minute, this L & GM remains an unbeatable



feat and world record even today.

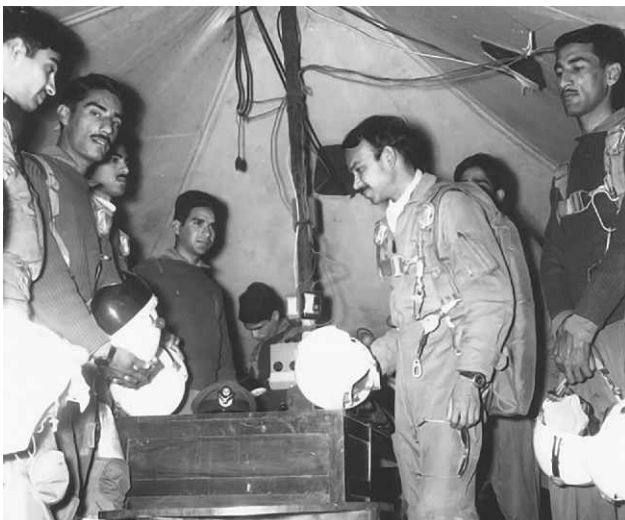
During this fateful day, IAF lost 54 aircraft, 19 aircraft in the air, and 35 on the ground, and suffered 52% attrition. That is the reason that every year 07 Sep, is celebrated as the Yume Fizaya.

13. Ladies and Gentleman, from 08 Sep till 23 Sep, Pakistan Air Force destroyed 149 tanks, 666 vehicles of various types, and 62 guns while, according to the independent sources, PAF destroyed 75 IAF aircraft while lost 16 aircraft either due to enemy action on the ground or in the air and lost 03 aircraft due technical failure. Interestingly, throughout the war, PAF flew 2279 aircraft sorties @ 15 sorties/aircraft while IAF flew 3939 sorties which comes out to be 07 sorties/aircraft. This speaks of the highest level of commitment and maintenance practices by the PAF's technical and support crew.

14. Ladies and Gentleman, Ceasefire was declared on 23 Sept 1965 and led to the Tashkent Declaration signed on 10 January 1966 with no mention of the Kashmir issue.

Ladies and Gentlemen, with this I come to the end of my part, and thank you very much for your patient hearing...

Air Commodore Zahid ul Hassan SI(M), TI(M), (R) is Director Research at the Center for International Strategic Studies Sindh (CISSS).



ANALYTICAL COMPARISON OF US AND CHINA'S TECHNOLOGICAL RACE: WHICH SIDE HOLDS MORE MERIT?

NUSRAT MIRZA



The technological race between the United States and China has become a defining element of the global geopolitical landscape, with both nations vying for supremacy in emerging fields like artificial intelligence (AI), quantum computing, and other disruptive technologies. At the heart of this competition are two key aspects: the ability to pioneer innovations and diffuse them effectively throughout their respective economies. A balanced and fact-based analysis reveals that while the U.S. and China bring substantial strengths to this race, the U.S.'s focus on diffusion offers a critical edge in long-term technological dominance.

CHINA'S CASE FOR LEADERSHIP IN TECHNOLOGICAL INNOVATION

Under President Xi Jinping, China's leadership has clearly believed in the transformative power of technological innovation. Xi highlighted the potential for technologies like AI to catalyze a new industrial revolution that could reshape global

power structures just as previous industrial revolutions did. From China's perspective, those who lead the way in innovation will dominate the geopolitical landscape of the 21st century.

Xi and other Chinese officials frequently draw historical parallels, comparing China's ambitions with Britain's dominance during the First Industrial Revolution and the U.S.'s rise after the Second Industrial Revolution. The logic is simple: nations that control groundbreaking technologies control global power. Chinese scholars echo this sentiment, predicting that China, with its robust investment in AI and other critical technologies, is poised to become the dominant power in the Fourth Industrial Revolution.

China's rapid advancements in AI research and development, alongside its strategic focus on technologies like 5G, are crucial components of this argument. Beijing has invested heavily in building technological ecosystems supporting homegrown innovations, setting ambitious goals for AI applications in healthcare, finance, and defense industries.

U.S. CASE: BEYOND INNOVATION THE POWER OF DIFFUSION

On the other hand, the United States views its technological future not only through the lens of innovation but also through the practical implementation and integration of

these technologies across its economy. American leadership, including President Joe Biden, acknowledges the importance of maintaining an edge in AI and other emerging fields. U.S. policymakers have clarified that China's technological ambitions are challenging U.S. supremacy.

However, the United States has a more profound advantage beyond the mere invention of new technologies: its diffusion capacity. Diffusion refers to adopting technological advancements across various industries and sectors, creating broad-based productivity gains. In this area, the U.S. has consistently outperformed its competitors, including China.

Historically, this has been a key driver of U.S. economic and geopolitical power. In the Second Industrial Revolution, for instance, the U.S. managed to overtake the U.K. not because it produced the most sophisticated machinery but because it effectively adapted machine tools across almost all branches of industry. This widespread adoption of new technologies allowed the U.S. to surpass its rivals in productivity. Today, the U.S. maintains similar advantages in AI and other information technologies. American businesses have quickly integrated innovations like cloud computing, smart sensors, and industrial software, giving the U.S. a significant edge in practical application. The country's educational institutions and strong ties between academia and industry ensure that innovations don't remain confined to laboratories but are rapidly adopted by the private sector.

**CRITICAL COMPARISON:
INNOVATION VS. DIFFUSION**

When comparing China and the United States in this technological race, it is essential to evaluate two dimensions: who is pioneering the most groundbreaking innovations and

who is better at integrating them into their broader economies.

CHINA'S STRENGTHS:

• INNOVATION FOCUS:

China's officials' emphasis on leading in AI and other disruptive technologies positions it well regarding invention and strategic innovation. The nation invests heavily in R&D, aiming to lead in emerging industries like autonomous vehicles, AI-driven healthcare, and advanced manufacturing.

• GOVERNMENT-LED STRATEGY:

Beijing's top-down approach ensures that resources are allocated efficiently to high-priority sectors, giving the country a rapid development trajectory in areas like 5G, quantum computing, and AI.

U.S. STRENGTHS:

• DIFFUSION ADVANTAGE:

The U.S. has a more decentralized, market-driven approach to technology diffusion, which has allowed it to spread innovations more quickly across diverse sectors. This gives the U.S. a long-term edge in reaping the economic benefits of new technologies.

• INSTITUTIONAL SUPPORT:

U.S. universities, technical institutes, and industry partnerships are geared toward training a highly skilled workforce to apply emerging technologies across various fields.



Continued on page 18

ONE YEAR OF THE ISRAEL-PALESTINE CONFLICT



MUHAMMAD AAMIR SULTAN



The war between Israel and Hamas that started a year ago on 7th October 2023 is one of the deadliest wars in recent times and for the Palestinians. This 5th war of Israel-Palestine started with the attack of Hamas on Israel. This surprise attack was a shock for Israel and it was also a failure of Mossad that it failed to anticipate an attack from Gaza. Hundreds of Hamas Mujahid crossed the barriers and attacked Israeli military bases and civilian settlers. In this attack, around 1200 people including more than 300 personnel of IDF were killed. 250 Israelis and foreigners were taken as hostage to force Israel to release Palestinian prisoners.

For the last 75 years, Israel's continued its occupation, demolishing of Palestinian houses, beleaguering of Gaza, encroachment of settlements, Israel's violation and disregard for international law, and threats to the Al-Aqsa Mosque. Hamas's attack came after the failure of the United Nations and world powers in resolving the Palestinian problem

and continuously ignoring the ordeal of the Palestinians.

Israel with the objectives of destroying Hamas and freeing hostages launched one of the most destructive bombing campaigns in modern times and invaded Gaza on 27 October 2023. Since then according to Associated Press, more than 42,000 Palestinians in Gaza have been killed of whom around 18,000 were women and children. More than 90% of the infrastructure of Gaza including houses, educational institutions, healthcare facilities, and business centers has been destroyed. Nearly 2.5 million population have been forcibly displaced and become homeless. Hundreds of thousands of children have become orphans.

Now on completion of one year of war, Gaza is desperately low on water, fuel, and supplies while Israel has restricted the amount of aid that can enter. Many humanitarian agencies suspended their operations after Israel killed several aid workers. The World Food Program warns famine is now imminent in Gaza. Only eleven out of thirty-five hospitals in the strip remain partially functional due to attacks on medical infrastructure and a lack of basic supplies. The World Health Organization has warned of disease spread in addition to mounting civilian casualties. And this "non-stop nightmare" for Palestinians is still going on.

Since the start of this war, it has been

argued that Why Hamas started a war when it cannot compete with Israel. Some analysts termed it a “false flag operation” in favor of Israel, some blamed Hamas as a product of Mossad, some considered Hamas a "Naive friend" of Palestinians, and criticized Hamas for attacking Israel. After one year of this conflict when the situation is assessed, we try to find out what Hamas has gained from this war.

INTERNATIONAL RECOGNITION OF THE CONFLICT:

The war in Gaza made the world realize that the Palestine - Israel issue is not yet over, it's alive and needs resolution. In the 79th annual session of the United Nations General Assembly, the world leaders emphasized on “Two-State solution” of the Palestine - Israel conflict. Out of 193 members of the United Nations 28 countries have not yet recognized Israel as a sovereign state. Before the start of the war, Saudi Arabia was very enthusiastically working to develop diplomatic and trade relations with Israel. Under Saudi influence, five other Muslim countries were also expected to recognize Israel. Hamas attack and war in Gaza halted this progress on Israel's recognition and now it's linked with Palestine state.

SUPPORT FROM THE INTERNATIONAL COMMUNITY:

During this conflict for the first time

Palestinian cause got huge support from people in Europe and the United States. Specially students fully supported Palestine and condemned Israeli atrocities in Gaza. Large demonstrations in favor of Palestine were held across Europe including England, France, Germany, Spain, Ireland, Netherlands, Switzerland, Austria, and Sweden.

In the United States history largest protest for Palestine and against Israel was held on 4th November 2023. In this "National March on Washington: Free Palestine", 200,000 to 300,000 people participated. The march called for a ceasefire in Gaza, and condemned Israel's “genocide in Gaza”. It was the largest Palestine solidarity protest in U.S. history.

On 11th November 2023, about 300,000 demonstrators marched in central London chanting “Stop bombing Gaza” and “Ceasefire now” in the largest Palestine solidarity demonstration held in the country so far, it was also one of the largest in British political history.

On 22nd October 2022 around 30,000 people waving Palestinian flags and chanting “Gaza, Paris is with you” gathered for the pro-Palestinian demonstration in Paris.

During one year of this war, the support of European and American people for Palestine



and their cause was unprecedented.

■ **DIPLOMATIC ADVANCES:**

Before the start of the war, 143 countries had recognized Palestine as a sovereign state in June 2024. Ireland, Spain, and Norway formally recognized Palestine as a state. Bahamas, Trinidad and Tobago, Jamaica, and Barbados are the other countries that have recognized Palestine this year. Belgium, Malta, and Slovenia are other European nations that are considering to recognize Palestinian statehood.

Besides people officials in the United States administration have also expressed their concern over Joe Biden's continuous support to Israel and at least one dozen officials have resigned in protest over President Joe Biden's Gaza policy accusing his administration of complicity in the killing and starvation of Palestinians as Israel's war on Gaza. Saudi Arabia which was keen to establish diplomatic relations with Israel and was completely quiet after Israel's invasion of Gaza has taken a turn. On 18th September de facto ruler the Crown Prince of Saudi Arabia Muhammad Bin Salman announced that the kingdom would not establish ties with Israel until a Palestinian state had been created.

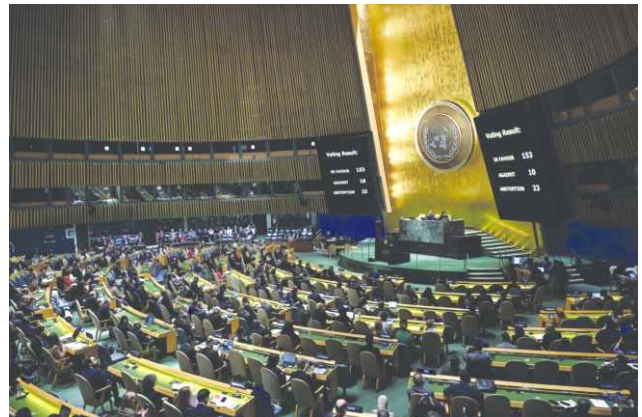
■ **SUPPORT AT UNITED NATIONS:**

On 18th September United Nations General Assembly overwhelmingly adopted a resolution calling on Israel to end its illegal occupation of the Palestinian territories within a year. The resolution "demands" the withdrawal of Israeli forces from the Palestinian territories, a halt to new settlements, the return of seized land and property, and the possibility of return for displaced Palestinians. There were 124 votes in favor, 14 against, and a notable 43 abstentions. This demonstration of international support for the Palestinian cause

was also evident during the 79th United Nations General Assembly. Even the most dependable ally of Israel Joe Biden also realized the need for a realistic and practical solution to the Palestinian crisis. Speaking at the U.N. General Assembly, Biden, who has come under fire for his administration's unconditional support to Israel, admitted that a two-state solution with a Palestinian state, in which Palestinians can live peacefully, is the only way to ensure permanent peace.

■ **ISRAEL HUMILIATION AT INTERNATIONAL COURT OF JUSTICE (ICJ):**

In December 2023 South Africa approached to International Court of Justice (ICJ)



accusing Israel of committing genocide against Palestinians in Gaza. South Africa's case maintained that Israel violated the 1948 Genocide Convention. Later 12 other countries either applied to join or declared intention to join this case. Those include:

- Applied to join were: Nicaragua, Columbia, Libya, Mexico, and Palestine.
- Declared intention to join: Belgium, Turkey, Egypt, Maldives, Ireland, Chile and Spain.

The ICJ delivered its opinion on 19 July 2024. The court held Israel responsible for the genocide of Palestinians since October 7 last

year. The Court added that Israel's legislation and measures violate the international prohibition on racial segregation and apartheid. The ICJ mandated Israel to end its occupation, dismantle its settlements, provide full reparations to Palestinian victims, and facilitate the return of displaced people.

The Court emphasized that Israel is under an obligation to bring to an end its unlawful presence in the Occupied Palestinian Territory as rapidly as possible, cease all new settlement activities, evacuate settlers, and make reparations for damages caused.

At present most of the countries are supporting the Two-State solution which is not

a new solution it was first proposed by the British Peel Commission report in 1937. It was a proposal for separate Arab and Jewish states. In the recent past, some UN members made some initiatives for granting recognition to Palestine. Australia, Ireland, Malta, Norway, Slovenia, Spain, and the United Kingdom are supporting this solution. Recently Joe Biden also spoke for a Two-State solution in his address to UNGA. But the question is can the United Nations and its 192 member countries and ICJ force Israel to adopt a Two-State solution and vacate the occupied territory?

The author is Sr. Associate Professor at Bahria University.

Continued from page 14

ANALYTICAL COMPARISON OF US AND CHINA'S TECHNOLOGICAL RACE:

This institutional framework ensures that innovations have a broader impact on productivity.

THE REAL DETERMINING FACTOR: WHO WILL LEAD THE FOURTH INDUSTRIAL REVOLUTION?

While China and the United States value pioneering innovations, history shows that the real determinant of technological success lies in how effectively a country can diffuse those innovations across its economy. The U.S.'s ability to translate breakthroughs into widespread productivity gains gives it a structural advantage that China, focusing on top-down innovation, has yet to match.

China's aggressive push for leadership in AI and other technologies is impressive, but innovation alone is insufficient. Their full potential will remain unrealized without the ability to diffuse these technologies effectively. In contrast, the U.S. has proven its capacity to integrate new technologies across diverse industries, enabling broad-based growth that

can sustain its technological leadership.

CRITICAL COMPARISON: INNOVATION VS. DIFFUSION

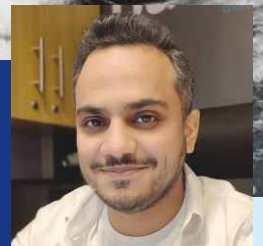
In the U.S.-China technological race, both sides present compelling claims to future dominance. China's focus on innovation, backed by strong government support, provides it with the potential to lead the world in key areas like AI and quantum computing. However, the United States' ability to diffuse technological advancements across its entire economy gives it a critical long-term advantage.

While China's innovation-centric approach may allow it to make significant strides in the near term, the U.S.'s focus on diffusion makes it better positioned to maintain global leadership in the coming decades. In the race to dominate the Fourth Industrial Revolution, the ability to spread and integrate innovations will likely prove more decisive than the capacity to invent them. Thus, the U.S. claim to technological leadership holds slightly more merit when viewed through this broader lens.

The author is the Chief Editor of Monthly Interaction.

THE PN HANGOR-CLASS SUBMARINE





THE PN HANGOR-CLASS SUBMARINE:

REINFORCING PAKISTAN'S NAVAL PROWESS **MIRZA KASHIF BAIG**

The Pakistan Navy (PN), consistently evolving to meet the challenges of modern warfare, has embarked on a strategic enhancement of its submarine fleet with the introduction of the Hangor-class submarines. This development marks a pivotal moment in Pakistan's naval defense strategy, further fortifying the country's maritime security.

HISTORICAL LEGACY OF THE HANGOR-CLASS SUBMARINE

The legacy of the Hangor-class submarines dates back to the historic PNS Hangor, which served with distinction during the 1971 Indo-Pak War. The original Hangor submarine gained international acclaim when it sank the Indian frigate INS Khukri, marking one of the most celebrated victories in naval warfare history. The new Hangor-class submarines pay homage to this legacy while incorporating cutting-edge technologies to address present-day naval threats.

DEVELOPMENT AND ACQUISITION

The development of the Hangor-class submarines stems from a critical strategic need to bolster Pakistan's underwater defense capabilities in light of regional maritime threats. With the decision to replace aging platforms, such as the Agosta-70 submarines, Pakistan turned to its trusted ally, China, for cooperation in constructing a modern fleet.

In 2015, Pakistan and China formalized a landmark defense agreement under which eight Hangor-class submarines would be procured. Four of these vessels are being built in China, while the remaining four are under construction at Karachi Shipyard and Engineering Works (KSEW) under a comprehensive transfer of technology (ToT) arrangement.

This acquisition serves multiple purposes: it enhances Pakistan's naval capabilities while contributing to local expertise and the growth

of Pakistan's defense industry.

The ToT agreement is particularly noteworthy, as it marks a significant step in the country's effort to reduce dependency on foreign suppliers and develop indigenous capabilities. The construction of the submarines at KSEW also signals Pakistan's growing shipbuilding capacity, setting a foundation for future naval projects.

DESIGN AND SPECIFICATIONS

The Hangor-class submarines, classified as Type 039B (S20) submarines, represent the pinnacle of modern submarine design. These diesel-electric attack submarines are engineered for stealth, endurance, and operational flexibility, making them a crucial asset in the Pakistan Navy's arsenal.

KEY SPECIFICATIONS:

DISPLACEMENT:

The submarines have a displacement of approximately 2,550 tons when submerged, placing them in the category of medium-sized attack submarines ideal for both shallow and deep-water operations.

LENGTH:

Measuring around 76 meters, these submarines offer ample space for sophisticated combat systems and a robust crew complement.

AIR-INDEPENDENT PROPULSION

(AIP):

One of the defining features of the Hangor-class is its AIP system. This technology allows the submarines to operate submerged for extended periods without the need to surface for air, significantly enhancing their stealth capabilities. This system enables endurance for weeks underwater, a critical advantage in avoiding detection by enemy forces.

SPEED AND ENDURANCE:

The Hangor-class is capable of reaching submerged speeds of over 20 knots, and with the AIP system, it can remain submerged for



longer durations than traditional diesel-electric submarines. The ability to stay hidden and silent is a force multiplier in underwater operations.

WEAPONS SYSTEMS:

Equipped with advanced torpedo tubes, the Hangor-class submarines are capable of launching heavy torpedoes as well as anti-ship and anti-submarine missiles. There is speculation that the submarines might also have the capability to carry and launch cruise missiles, adding an additional layer of strategic deterrence to Pakistan's naval forces.

SENSORS AND COUNTER MEASURES:

The submarines are fitted with state-of-the-art sonar and sensor systems, designed for detecting and tracking enemy vessels over a wide range. The Hangor-class is also equipped with countermeasure systems to evade enemy detection and mitigate threats such as depth charges and torpedoes.

STRENGTHENING MARITIME SECURITY

In the realm of maritime security, the Hangor-class submarines are designed to be a formidable deterrent against regional threats. These submarines possess the ability to engage in a wide range of operations, from anti-surface and anti-submarine warfare to intelligence gathering and reconnaissance

missions.

Their advanced weaponry, including torpedoes and potentially cruise missiles, ensures they are well-equipped to counter both surface and underwater threats. The operational flexibility offered by these submarines will play a critical role in securing Pakistan's maritime interests, particularly in the Arabian Sea.

Given the strategic significance of the region, the presence of these state-of-the-art vessels will bolster the Pakistan Navy's ability to protect sea lines of communication (SLOCs) and maintain regional stability.

TRANSFER OF TECHNOLOGY: BUILDING LOCAL EXPERTISE

A key component of the Hangor-class project is the transfer of technology from



China to Pakistan. This initiative aligns with Pakistan's broader goal of developing its indigenous defense production capabilities.

The construction of four submarines at Pakistan's Karachi Shipyard and Engineering Works (KSEW) will significantly enhance the country's shipbuilding expertise, contributing to the development of a self-reliant defense industry. This transfer of technology is not only about manufacturing submarines but also involves training Pakistani engineers and technicians in modern naval construction and design practices.

As a result, Pakistan will develop the expertise required for future submarine construction and maintenance, reducing its reliance on foreign suppliers and reinforcing its strategic autonomy.

STRATEGIC IMPLICATIONS

The induction of the Hangor-class submarines into the Pakistan Navy fleet has far-reaching strategic implications for the region. These submarines will serve as a critical component of Pakistan's second-strike capability, a cornerstone of its nuclear deterrence strategy. By enhancing the navy's underwater warfare capabilities, these vessels will act as a powerful deterrent, contributing to the overall balance of power in the region.

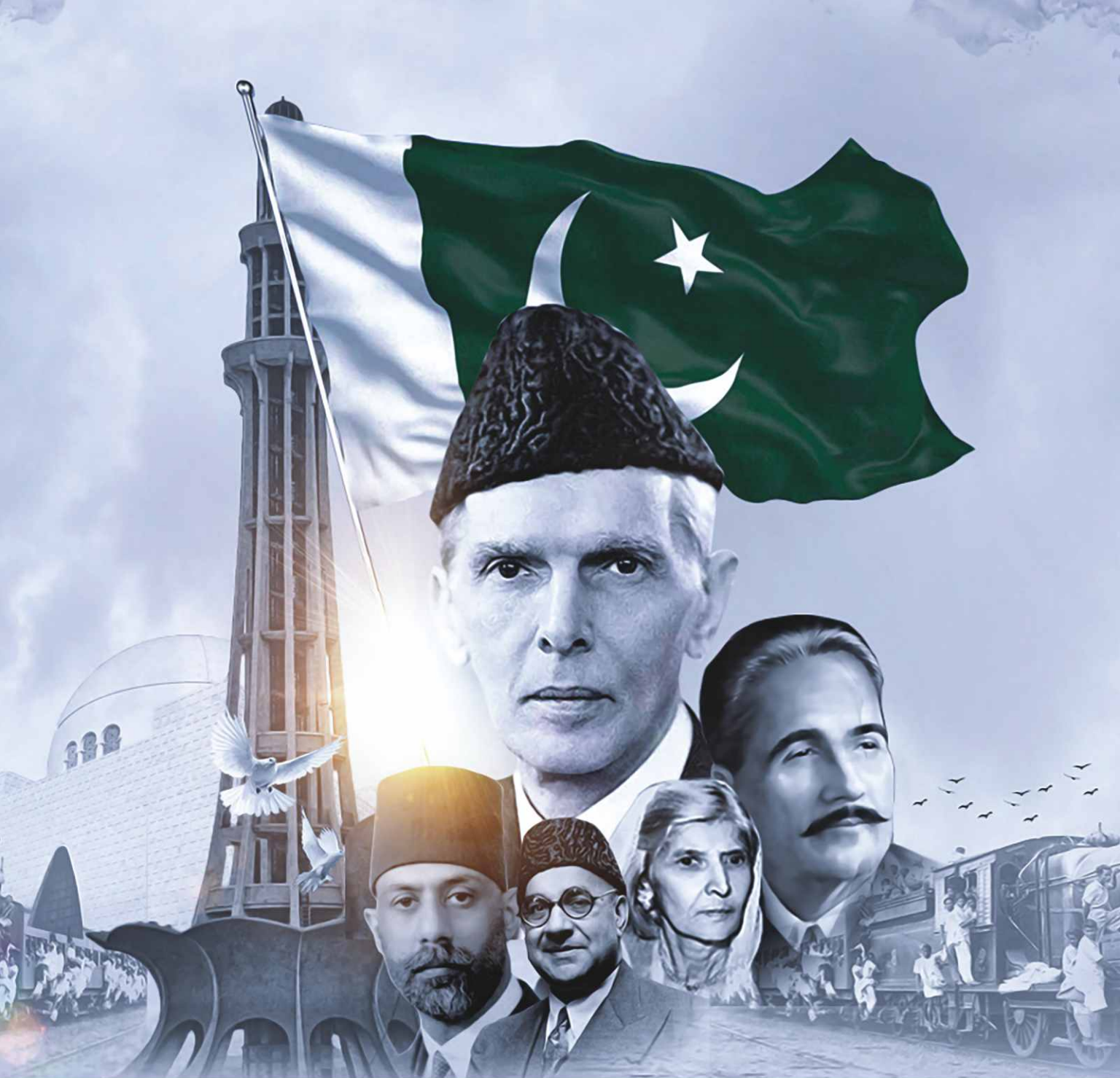
Moreover, the partnership with China on this project is indicative of the deepening strategic relationship between the two countries, particularly in defense cooperation. This collaboration strengthens Pakistan's position in the region, particularly as it faces evolving security challenges in the Indian Ocean and beyond.

CONCLUSION: A NEW ERA FOR THE PAKISTAN NAVY

The Hangor-class submarines represent a quantum leap in the Pakistan Navy's capabilities, blending the historical legacy of the original Hangor with the technological advancements required for modern naval warfare. As these submarines begin to join the fleet, they will not only enhance Pakistan's defense posture but also signal the country's growing naval expertise and self-reliance.

In an era of shifting geopolitical dynamics, the Hangor-class submarines stand as a testament to Pakistan's commitment to safeguarding its maritime interests and maintaining regional peace.

The author is the Editor of monthly Interaction.



PAKISTAN CORNER

Welcome to "Pakistan Corner," a dedicated section in our magazine where we explore the rich tapestry of Pakistan's history, culture, and legacy before and after its independence. This series aims to illuminate the diverse heritages, local languages, various cultures, and unsung heroes of the nation, offering our readers an in-depth look into the different facets that shape today's Pakistan.

PAKISTAN CORNER

PAKISTAN'S EARLY YEARS: FROM PARTITION TO SURVIVAL (1947-1949)

INTERACTION TEAM

The dawn of August 14, 1947, marked the culmination of a long and arduous struggle. The creation of Pakistan, under the inspiring leadership of Quaid-e-Azam Muhammad Ali Jinnah, was a monumental achievement, born from the dreams and sacrifices of millions.

However, as the celebrations of independence subsided, Pakistan faced the overwhelming challenges of transforming a newly formed state into a functional and thriving nation. The period from 1947 to 1949 would be defined by the country's intense struggle to establish stability, preserve sovereignty, and build the foundations of a future on the principles for which it was created.

The partition of British India left an indelible mark on the subcontinent. The hurried demarcation of borders by the Radcliffe Award led to one of the largest mass migrations in human history. Nearly 15 million people were displaced as Hindus and Sikhs

moved to India, and Muslims migrated to Pakistan. The violence accompanying this migration claimed hundreds of thousands of lives and created an unparalleled humanitarian crisis.

THE REFUGEE CRISIS: Pakistan, barely days old, was inundated with nearly 10 million Muslim refugees fleeing violence and persecution. Karachi, Lahore, and several cities of Punjab were overrun with camps and



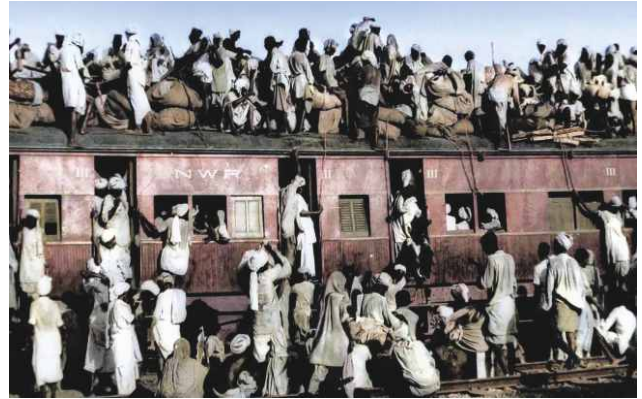


settlements. The newly formed government faced immediate challenges in providing food, shelter, and medical care to this displaced population.

Disease outbreaks such as cholera and typhoid spread rapidly in the refugee camps, compounding the crisis. Quaid-e-Azam Jinnah issued urgent directives for the resettlement and care of the refugees, emphasizing that they must be treated with dignity and compassion.

Following partition, the division of assets between India and Pakistan proved to be a major sticking point. Pakistan, a state with limited resources and infrastructure, received only 17.5% of the assets of undivided India, including financial reserves, military equipment, and government infrastructure.

The Indian government delayed the transfer of Pakistan's due share of assets, further crippling the fledgling state's economy.



Jinnah and Liaquat Ali Khan's persistent negotiations led to the eventual disbursement of funds, but the delays had already caused significant economic hardship.

The financial difficulties were further compounded by the lack of a proper banking system. Pakistan initially used Indian rupees, with an overstamp marking them for use in the new state. In 1948, the Government of Pakistan issued its own currency to establish fiscal autonomy. The establishment of the State Bank of Pakistan in July 1948 was a pivotal moment in consolidating the economic structure of the country, providing a central authority for monetary policy and banking regulation.

The administrative framework of the new country was severely underdeveloped. Pakistan inherited a small, largely agrarian economy with limited infrastructure and an underdeveloped industrial base. The regions that formed Pakistan East Bengal (later Bangladesh), West Punjab, Sindh, Balochistan, and Khyber Pakhtunkhwa had few administrative facilities, as most civil servants chose to stay in India.

Pakistan's bureaucracy, a skeletal structure at best, had to be rebuilt from the ground up. Many of the civil servants who chose to migrate from India had to be integrated into a system that lacked proper facilities, training, and organization. Quaid-e-Azam



Muhammad Ali Jinnah, as Governor-General, led efforts to build the administrative machinery of the state, often personally involving himself in decisions to stabilize governance.

In addition to civil administration, Pakistan inherited a fragmented military force. The partition had divided the British Indian military between the two countries, but Pakistan received a smaller share of equipment and officers. General Sir Frank Messervy was appointed the first Commander-in-Chief of the Pakistan Army, tasked with integrating the new forces and preparing them for defense in a volatile regional environment. The military's lack of resources became a critical issue, particularly as tensions with India escalated over Kashmir.

The most significant territorial dispute between Pakistan and India erupted almost immediately after independence: the Kashmir conflict. The princely state of Jammu and Kashmir, ruled by Maharaja Hari Singh, was predominantly Muslim but had not acceded to either India or Pakistan.

In October 1947, after tribal militias from Pakistan's northern areas entered Kashmir in support of the local population's desire to join Pakistan, the Maharaja sought military assistance from India, which led to his

controversial decision to accede to India. India responded by sending troops into Kashmir, leading to the first war between the two newly independent states.

The conflict over Kashmir soon became a full-scale military engagement. Pakistan's armed forces, under-equipped and in the midst of structural organization, faced a daunting challenge. Despite this, Pakistan managed to retain control over a portion of Kashmir (now known as Azad Jammu and Kashmir). A ceasefire was brokered by the United Nations in 1949, establishing a temporary Line of Control (LoC) but leaving the Kashmir issue unresolved. The Kashmir conflict drained Pakistan's resources and became a focal point of its foreign policy and military strategy for decades to come.

While grappling with territorial disputes and economic hardship, Pakistan was also tasked with defining its identity as a nation. The Constituent Assembly convened to draft the country's first constitution, but the process was fraught with ideological disagreements. Quaid-e-Azam's vision for a secular, inclusive Pakistan clashed with the growing demands for an Islamic state.

Under Prime Minister Liaquat Ali Khan's leadership, the Constituent Assembly adopted the Objectives Resolution in 1949. This landmark document outlined the principles



upon which Pakistan's constitution would be based, declaring that sovereignty over the entire universe belongs to Allah, and that the authority to be exercised by the people of Pakistan within the limits prescribed by Him is a sacred trust.

It sought to balance Islamic principles with democratic governance, paving the way for future constitutional development. The Objectives Resolution remains a cornerstone of Pakistan's constitutional and ideological framework.

The death of Quaid-e-Azam Muhammad Ali Jinnah on September 11, 1948, was a devastating blow to Pakistan. Jinnah had been the driving force behind the creation of the state and the chief architect of its early development.

His absence left a leadership vacuum, and the responsibility of guiding Pakistan through its formative years fell to Prime Minister Liaquat Ali Khan. Liaquat, an astute statesman, worked tirelessly to carry forward Jinnah's vision, focusing on economic reforms, diplomatic efforts, and the integration of diverse ethnic and religious groups into a unified national identity.

Despite the turbulence of these years, Pakistan began to establish its cultural and social identity. The refugee influx transformed cities like Karachi and Lahore into hubs of cultural and intellectual activity. Writers, poets,



and artists who had migrated from India began contributing to Pakistan's nascent literary and artistic scene, with figures like Faiz Ahmed Faiz and Saadat Hasan Manto gaining prominence.

Karachi, the initial capital of Pakistan, quickly developed into a cosmopolitan city, hosting government offices, refugee settlements, and commercial enterprises. The city's port became a vital lifeline for the country's trade and economic development. The urbanization of Karachi marked the beginning of Pakistan's industrial growth, even as the rest of the country remained largely agrarian.

The years from 1947 to 1949 were a time of unprecedented hardship for Pakistan. The country faced challenges on multiple fronts: political, economic, and military. Yet, the resilience of its leadership and people ensured that the new state survived and began to consolidate its position on the world stage.

As Pakistan navigated these formative years, it laid the foundations for its future as a sovereign, independent, and resilient nation. The sacrifices made during this period were immense, but they were necessary steps in Pakistan's journey toward stability and prosperity... **(Continue...)**



THE AKKADIAN EMPIRE



CULTURAL CORNER

THE AKKADIAN EMPIRE: THE FIRST ANCIENT EMPIRE OF MESOPOTAMIA

INTERACTION TEAM

In the heart of ancient Mesopotamia, nestled between the Tigris and Euphrates rivers, the Akkadian Empire emerged as the world's first empire around 2334 B.C. Under the leadership of Sargon of Akkad, this empire marked a significant turning point in the history of human civilization. As the Akkadians unified vast lands under a single rule, they established precedents in governance, military strategy, and cultural integration, shaping the future of Mesopotamian society and influencing empires for millennia to come.

THE RISE OF AKKAD

Before the rise of the Akkadian Empire, Mesopotamia was home to numerous independent city-states, each vying for power and dominance. Sargon of Akkad, born in humble beginnings, rose to power by overthrowing the king of Kish and establishing his capital in the city of Akkad. This marked the beginning of an unparalleled period of conquest and expansion. Within a short span,



Sargon unified the previously fragmented city-states of Sumer, extending his influence from the Persian Gulf to the Mediterranean Sea. His empire became the first in history to bring multiple ethnic groups and regions under a centralized, authoritative rule.

MILITARY MIGHT AND STRATEGIC DOMINANCE

The Akkadian Empire's success can largely be attributed to its advanced military tactics and organizational structure. Sargon implemented a standing army, a revolutionary concept at the time, which enabled swift and decisive military campaigns. His forces were well-trained and disciplined, making the Akkadian army one of the most formidable in the ancient world.

Sargon's conquests were not limited to Mesopotamia; he extended his reach to Elam in the east and the Levant in the west,



establishing Akkad as a dominant force in the ancient Near East.

One of the empire's key military strategies was the use of fortified garrisons in conquered territories. This not only helped to maintain control over vast distances but also ensured a rapid response to any insurrections. By doing so, Sargon ensured the stability of his empire, allowing for long periods of peace and prosperity within its borders.

GOVERNANCE AND ADMINISTRATION

The governance of the Akkadian Empire was both innovative and far-reaching. Sargon appointed loyal officials, often members of his family, to oversee distant territories. These governors acted as extensions of the central authority, ensuring that the empire's policies and laws were implemented uniformly across the vast regions. This decentralized form of administration allowed Sargon to maintain control over his sprawling empire.

In addition to the political governance, Sargon established a postal system to facilitate communication across the empire, enabling efficient administration. Taxation was standardized, and a tribute system was introduced to ensure a steady flow of wealth into the imperial treasury. These administrative innovations were crucial in maintaining the Akkadian Empire's stability and prosperity over time.

RELIGION AND IDEOLOGY

Much like the Sumerians, the Akkadians believed that their rulers were chosen by the gods, and Sargon positioned himself as the divine ruler of the empire. He proclaimed himself as the "King of the Four Quarters of the World," emphasizing his god-given authority to rule over all lands and peoples. Religion played a central role in legitimizing the Akkadian rulers' power, and Sargon and his successors were often depicted in art and literature as being favored by the gods.

The Akkadian Empire also saw the rise of the goddess Ishtar, who became a prominent deity in the Akkadian pantheon. Temples dedicated to Ishtar were erected throughout the empire, and her worship became intertwined with the political authority of the empire's rulers.

CULTURAL ACHIEVEMENTS AND INNOVATIONS

The Akkadian period was a time of significant cultural and intellectual advancements. Akkadian, a Semitic language, replaced Sumerian as the lingua franca of the empire. This linguistic shift was a reflection of the empire's multi-ethnic composition, with Akkadian becoming the dominant language in administrative and diplomatic affairs.

The empire also saw advances in art and architecture. The iconic victory stele of Naram-





Sin, Sargon's grandson, depicts the ruler as a godlike figure, symbolizing the divine nature of kingship. This form of art, characterized by its bold and monumental style, became a hallmark of Akkadian culture. In architecture, the Akkadians continued the Sumerian tradition of constructing ziggurats, massive terraced structures that served as both temples and administrative centers.

THE FALL OF THE AKKADIAN EMPIRE

Despite its early success, the Akkadian Empire began to decline after the death of Sargon's grandson, Naram-Sin. A series of internal rebellions, coupled with invasions by external forces such as the Gutians, led to the fragmentation of the empire. Environmental factors, such as drought and famine, also played a significant role in the empire's collapse. By 2154 B.C., the Akkadian Empire had disintegrated, marking the end of an era in Mesopotamian history.

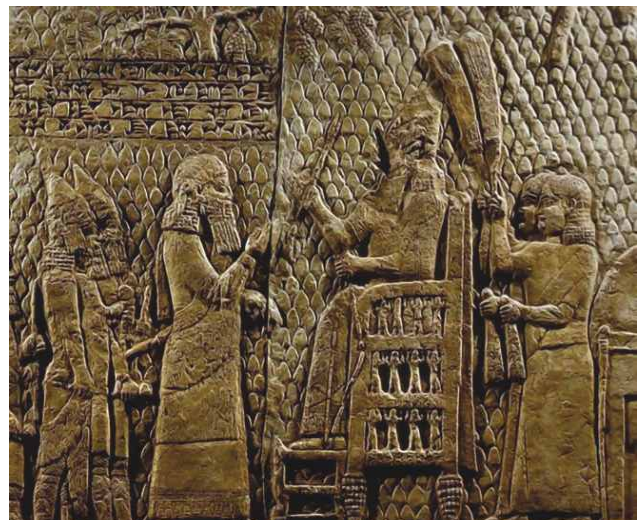
THE LASTING LEGACY OF AKKAD

Though the Akkadian Empire eventually fell, its influence continued to shape the civilizations that followed. The concept of a centralized empire ruled by a single authority became a model for future empires in the region, including the Babylonian and Assyrian empires.



The administrative and military innovations introduced by Sargon and his successors laid the groundwork for the governance of vast territories, while the cultural achievements of the Akkadian period left an indelible mark on Mesopotamian society.

The Akkadian Empire's legacy is one of unity, innovation, and cultural fusion. Its rise and fall offer valuable insights into the complexities of empire-building and the challenges of maintaining power over diverse and distant lands. As the first true empire in history, Akkad stands as a testament to the enduring human pursuit of power, governance, and cultural advancement.



THE NATIONAL INSTITUTE FOR LASER AND OPTRONICS



SYED SAMIULLAH



The National Institute for Laser and Optonics (NILOP), established in 2007, is a leading research center in Pakistan focused on advancing technology and education in lasers and their various applications. Located near Islamabad, it offers a serene research environment and has become a key player in the country's scientific community due to its extensive research facilities and highly skilled staff. With over 80 faculty members and scientists, supported by 120 technical staff, NILOP blends fundamental research with applied sciences and postgraduate teaching. It specializes in laser development, spectroscopy, material sciences, and biophotonics. As a constituent college of the Pakistan Institute of Engineering and Applied Sciences (PIEAS), NILOP offers an array of specialized courses at the PhD level, ranging from Advanced Atomic and Molecular Physics to Micro and Nano Fabrication. These courses are meticulously designed to provide a solid foundation in advanced scientific concepts

while fostering innovative research in emerging fields such as quantum information, optical interferometry, and terahertz science.

To ensure that the academic and research pursuits of the students are aligned with the institute's objectives, NILOP has established the Graduate Program and Research Council (GPRC). This council oversees student affairs, including the approval of research projects and the formulation of individualized study plans in consultation with faculty supervisors.

One of NILOP's core objectives is to support sustainable research in the design, fabrication, and application of lasers and optoelectronics. This mission is realized through close collaboration with universities and the provision of state-of-the-art laboratory facilities for MS, M.Phil, and PhD research. To strengthen these collaborative efforts, NILOP has signed numerous Memoranda of Understanding (MoUs) with leading public and private sector universities. NILOP's contributions extend beyond academia and research. It has made notable advancements in the development of indigenous laser-based technologies for diverse applications. For example, the institute developed a laser-based Agro Land Leveler system, with 1,200 units distributed to the provincial governments of Punjab and Sindh, significantly improving agricultural productivity and efficiency.

Continued on page 48

THE ROLE OF CYBER WARFARE IN SHAPING MODERN MILITARY STRATEGY



MS. KHUSHBOO FARID KHAN GHOURI

The power rivalry among global major powers has consistently relied on the strategic security landscape. Over time, warfare has evolved with advancements in weapons and technology. In the 20th century, nuclear weapons shifted competition from conventional to unconventional strategic competition. The 21st century brought another revolution with the rise of cyber warfare. Today, Beijing, Moscow, and Washington compete across all domains, with cyberspace now the fifth battlefield. The U.S., Russia, and China heavily rely on cyberspace for military operations, fueling a cyber arms race and ongoing strategic competition in this domain. Moreover in the 21st century, cyber warfare has become a central element in modern military strategy. As technological advancements accelerate, states have recognized the power of cyber operations as both a tool for offense and defense. The fusion of military doctrine with cyber capabilities is reshaping how conflicts are fought, not only in

the physical domain but also in the invisible realm of cyberspace.

Governments and militaries worldwide now recognize that cyber warfare offers asymmetric advantages, allowing states to launch attacks without direct confrontation, often with plausible deniability. State-sponsored cyber-attacks have prompted nations to reconsider their military doctrines. Integrating cyber capabilities into defense strategies shows that future conflicts will heavily involve cyberspace. Military doctrines now emphasize the need for cyber defense, offense, and resilience. Russia, China, and the U.S. have been at the forefront of this development, each employing unique cyber strategies tailored to their military and geopolitical objectives.

Russia has long been recognized as a key player in cyber warfare, adopting strategies that blend conventional military operations with cyber-attacks to achieve political and strategic goals. The Russian model of cyber warfare emphasizes information warfare, where the intent is to manipulate public perception, sow discord, and weaken adversary morale. Russia's use of Advanced Persistent Threat (APT) groups, such as Fancy Bear and Cozy Bear, highlights its focus on espionage, disinformation, and election interference. Key operations, such as the 2016 U.S. election meddling and the NotPetya ransomware attack, demonstrate how Russian



cyber capabilities are integrated into its military doctrine.

Furthermore, Russia also uses cyber warfare as a tool for hybrid warfare, where cyber-attacks are synchronized with conventional military actions. This approach was clearly observed during the Russo-Georgian War in 2008 and the recent Russo-Ukrainian conflict. The cyber dimensions of these conflicts show how Russia blends hacking, disinformation campaigns, and psychological operations to destabilize adversaries, gain strategic leverage, and influence international perceptions of the conflict.

On the other hand, China's approach to cyber warfare is heavily influenced by its ambition to become a dominant global power. China has built advanced cyber capabilities through the PLA's Strategic Support Force, which manages military cyber operations. China prioritizes espionage and intellectual property theft, seeking to undermine U.S. military and economic superiority. Cyber-enabled espionage operations, such as Operation Cloud Hopper Chinese Spy Balloon incident, and the APT10 group, illustrate China's persistent efforts to steal sensitive defense information from Western industries and governments.

China's doctrine of "Active Defense" guides its cyber strategy, blending defensive postures with preemptive cyber strikes. The Chinese government sees cyber warfare as an essential component of broader strategic operations, enhancing its ability to conduct network warfare, gain battlefield awareness, and neutralize enemy capabilities. The focus is not only on traditional military assets but also on civilian infrastructure, as demonstrated by China's attacks on the U.S. energy grid and telecommunications networks.



Instead, The United States has acknowledged cyber warfare as a critical domain of national defense and offense. The U.S. Department of Defense has articulated its cyber strategy under the notion of "persistent engagement" and "defend forward," where cyber operations are proactively conducted to disrupt potential threats before they materialize. U.S. Cyber Command (USCYBERCOM) plays a pivotal role in executing these operations, targeting adversaries' military and civilian infrastructures to mitigate threats in real-time.

The U.S. has conducted significant cyber campaigns, including Stuxnet, a malware attack that disrupted Iran's nuclear program in 2010. This operation exemplifies how cyber tools can achieve strategic objectives without resorting to kinetic warfare. U.S. doctrine now includes using cyber capabilities as a tool to support conventional military operations, as seen in operations against ISIS, where cyber-attacks were used to disable communication channels and disrupt command structures.

As the great powers of the world, the United States, Russia, and China are deeply engaged in a cyber struggle that has far-reaching implications for international security. This rivalry transcends traditional military engagements and enters domains such as cyber espionage, cyber deterrence,

and global infrastructure manipulation.

China has extensively targeted U.S. companies and government institutions in attempts to acquire intellectual property, defense blueprints, and trade secrets. This theft of intellectual capital has not only heightened tensions between the two powers but also impacted the global economic order. The U.S. indictments of Chinese hackers, particularly from groups like APT41, underscore the scale of this cyber espionage. In response, the U.S. has enhanced its cybersecurity capabilities and increased cooperation with allies to counter Chinese cyber influence, establishing frameworks for collective cyber defense.

However, Cyber deterrence between the U.S. and China remains fragile, mainly due to the secrecy surrounding cyber capabilities and the challenge of attributing attacks to specific state actors. Both countries have developed a posture of mutually assured destruction in cyberspace, where a significant cyber-attack could escalate into broader conflict. The stakes are high: cyber warfare between these superpowers could destabilize global supply chains, disrupt financial markets, and damage critical infrastructure, making international cooperation on cyber norms and rules of engagement imperative for future stability.

The Russo-Ukrainian War highlights how cyber warfare integrates into broader military campaigns. Both sides use cyber-attacks to disrupt operations, target civilian infrastructure, and shape international narratives. Russia's attacks on Ukraine, such as BlackEnergy (2015) and Industroyer (2016), disrupted critical infrastructure, while the 2022 Viasat attack disabled communication systems ahead of the invasion, showcasing the link between cyber

and kinetic warfare.

Russia's cyber strategy in Ukraine displays unusual patterns, with destructive attacks appearing more focused on destabilizing Ukraine than achieving specific military goals. The NotPetya attack, for instance, spread indiscriminately, impacting global companies beyond Ukraine. These chaotic attacks raise concerns about Russia's control over its cyber tools and its tolerance for collateral damage.

Ukraine has demonstrated impressive cyber resilience, quickly recovering from attacks with help from Western cybersecurity firms and NATO allies, who have provided defense tools and intelligence. This collaboration underscores the trend of international partnerships in cyber warfare. The conflict suggests potential future directions for cyber warfare, including its integration into conventional military strategies or the creation of cyber defense coalitions similar to NATO.

Cyber warfare is transforming modern military strategy by providing states with new tools for achieving strategic objectives. The experiences of the U.S., China, and Russia demonstrate the power of cyber-attacks to influence military doctrines, disrupt adversaries, and shape global security. As cyber capabilities continue to evolve, the need for international norms, cooperation, and cyber deterrence mechanisms will be crucial in preventing escalation and maintaining global stability. Cyber warfare's implications for the future of conflict are profound, suggesting that the cyber domain will remain a central battleground for state actors in the decades to come.

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LEGAL RAMIFICATIONS OF COVERT OPERATIONS:

THE 2024 PAGER EXPLOSIONS IN LEBANON AND INTERNATIONAL LAW

WAJEEHA NAJAM



Lebanon has been in a state of political and economic turmoil for years, intensified by the 2020 Beirut port explosion, which severely damaged the country's economy and left lasting scars on its infrastructure. Civil unrest and economic hardships have only worsened, fueled by political deadlock and sectarian divisions.

Lebanon's governance remains fragmented, with political factions often split along religious and sectarian lines, making it difficult to implement unified policies. External intervention and proxy conflicts have further deepened these divisions, particularly with Iran-backed Hezbollah using significant influence in the southern part of the country, while Western and Saudi Arabian allies compete for control over the central government.

In this volatile environment, the 2024 pager explosions took place. Reports indicate that outdated communication devices, once common in Lebanon, were rigged with explosives and strategically placed in public spaces across Beirut and other cities. These explosives were detonated in close succession, causing significant damage and loss of life.

The legal implications of these events touch on several key issues. First, the principle of sovereignty and non-intervention in international law, enshrined in Article 2(4) of the United Nations Charter, prohibits states from interfering in the domestic affairs of other



nations. If Israeli intelligence carried out these operations in Lebanon, it would be seen as a violation of Lebanon's territorial integrity and sovereignty.

Such acts could be categorized as foreign intervention, which is generally prohibited under international law unless justified by self-defence or authorized by the UN Security Council. The planting of explosives in Hezbollah-controlled areas would be a direct infringement upon Lebanon's sovereignty, particularly if done without the government's knowledge or consent.

Additionally, the use of force, as outlined under Article 2(4) of the UN Charter, prohibits the threat or use of force against the territorial integrity or political independence of any state. While Hezbollah is not a traditional state actor, its significance as a non-state military force in Lebanon complicates the situation.

If Israeli intelligence planted these explosives to cause destruction or kill within

Lebanese territory, it could be viewed as an unlawful use of force. This could even be seen as an act of aggression under customary international law and the Rome Statute of the International Criminal Court (ICC), which defines aggression as the use of force by one state against another in violation of the UN Charter.

Under international law, state responsibility holds that a state is liable for the actions of its agents, including intelligence services, if they violate international norms. Therefore, if Israeli intelligence acted illegally, Israel could be held responsible for the consequences of these actions. Lebanon might seek reparations or raise the issue in an international forum such as the International Court of Justice (ICJ), arguing that Israel violated its sovereignty and unlawfully used force within its borders.

Israel may attempt to justify its actions under the right to self-defence, as permitted under Article 51 of the UN Charter. Israel has long considered Hezbollah a significant security threat due to the group's military capabilities and rocket attacks targeting Israeli territory.

However, the principle of self-defence is limited by the criteria of necessity and proportionality. Any use of force must be directly linked to an immediate threat, and Israel would need to demonstrate that planting explosives in Hezbollah-controlled

areas was necessary to prevent an imminent attack. The 'Caroline Test,' a key doctrine in international law, stipulates that self-defence must be immediate and unavoidable, leaving no alternative for addressing the threat. Proving that the use of pagers rigged with explosives was the only available option could be challenging for Israel.

International Humanitarian Law (IHL) is also relevant, as it applies to both state and non-state actors engaged in armed conflict. Hezbollah, though a non-state actor, is bound by IHL principles concerning the protection of civilians. If Israeli intelligence targeted Hezbollah members involved in military operations, it could be justified under IHL, which allows the targeting of combatants. However, if civilians were harmed, or if the explosive devices indiscriminately affected non-combatants, this would violate the principle of distinction, which requires parties to a conflict to distinguish between military targets and civilians.

The involvement of Taiwan, as the manufacturer of the pagers used in the explosions, introduces additional complexity. While Taiwan could face scrutiny if it knowingly supplied devices for use in acts of violence, its legal responsibility would be limited if its role was merely as a manufacturer without knowledge of their intended use.

Finally, the use of explosives in intelligence operations borders on covert warfare, which is regulated by both international legal frameworks governing espionage and the use of force. While espionage itself operates in a legal grey zone, actions that result in direct harm, such as the planting of explosives, fall under the prohibitions outlined in the UN Charter and international humanitarian law.

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IRAN-PAKISTAN GAS PIPELINE, AT WHAT COST?



DR. S. BUSHRA BATOOL

Iran-Pakistan (IP) gas pipeline, also known as Peace Pipeline, is a long-awaited project, envisaged to supply 750 million to a billion cubic feet of natural gas per day from Iran's South Pars gas field to Pakistan over 25 years. Signed in June 2009 between Iran and Pakistan, the project was aimed to stretch over 1,900 kilometres, 1,150 km within Iran and 781 km within Pakistan, to be completed by 2014 and start operations by 1 January 2015. Delays on Pakistan's side however, have stalled the project. Under the original agreement, Pakistan was obligated to pay \$1 million per day in penalties to Iran starting from January 1, 2015, if the project was not completed. Plans to partially implement the project by constructing an 81-kilometre pipeline from Gwadar to the Iranian border also failed to materialize. Despite that Tehran says it has already invested \$2 billion to construct the pipeline on its side of the border, making it ready to export the gas, Pakistan has

faced delays and funding challenges for several years, derailing the process. In 2019, Pakistan and Iran revised their contract, stipulating that Pakistan would complete its segment of the pipeline by 2024.

Although the project would be a significant development between the two countries by supplying roughly 750 million cubic feet of gas per day to Pakistan and enhance connectivity between them, a number of challenges surround the project that hamper its completion. The security situation in Balochistan makes the situation volatile to complete the project especially in those areas where the pipeline is supposed to pass. Recently, militant insurgency has been frequently occurring in the resource-rich south-western province of Balochistan bordering Iran. In past month only, 70 people, including 23 civilians were reportedly killed and key infrastructural damage was made in a series of attacks, claimed by the Baloch Liberation Army (BLA). BLA is a militant group fighting against the government authorities sighting unfairly appropriating Balochistan's rich gas and mineral reserves.

Reports estimate that 70% of the people in Balochistan are categorized as 'multi dimensionally poor,' suffering from multiple disadvantages due to poverty at the same time. In such a scenario, it makes the completion of this trans-border pipeline extremely difficult. In January 2024 also, the





BLA was at the centre of allegations by Pakistan and Iran and led to tit-for-tat cross-border missile and air strikes between the two countries. The situation was however managed with no further escalation by both countries. Another grave concern in completion of pipeline project is the US sanctions on Iran. The question arises how the US has an influence in Pakistan's domestic as well as international affairs. In domestic politics, the US has been accused for meddling in Pakistan's domestic politics, charges that Washington denies. In international politics, since Pakistan has officially been an ally and a key partner to the US in fighting extremism in Afghanistan, it has strained Pakistan-Afghanistan relations at many instances.

In spite of Washington's dependence on Pakistan to supply its troops during its long war in Afghanistan, the US has always been sceptical of Pakistan and accused Islamabad for playing a double game. In context of Iran-Pakistan gas pipeline, Iran has been highly disappointed of Pakistan, which due to the US pressure, still shows lack of any progress on the pipeline project. The US State Department spokesperson Matthew Miller during a briefing has warned Pakistan of the ramifications if Pakistan and said: "We will continue to enforce our sanctions against Iran. We also advise anyone considering a business deal with Iran to be aware of its possible

ramifications, ... we always advise everyone that doing business with Iran runs the risk of touching upon and coming in contact with our sanctions, and would advise everyone to consider that very carefully." He further talked about how helping Pakistan addressing its energy shortage was a priority for the US, however, the US does not support Pakistan-Iran gas pipeline project from going forward.

Recently in September, reports suggest that Iran has given a final notice to Pakistan and warned to take legal action in the Paris Arbitration Court if Islamabad fails to construct its segment of the gas pipeline by the extended deadline of September 2024 or else heavy penalty. Although Pakistan has not confirmed any such reports, Pakistan Federal Minister for Petroleum Musadik Malik's comments while responding to a question by a lawmaker on the floor of the house said: "This is a deeply complicated matter and involves international sanctions."

Earlier also, he has spoken about Pakistan desire to present its case to the US and seek an exemption from sanctions as a mechanism adopted by Turkiye, Iraq, and Azerbaijan. About the reports of Iran imposing penalty on Pakistan for violating agreement to execute the pipeline project, he rejected the claim by saying that Iran never talked about \$18 billion fine and that neither Iran, nor Pakistan had done any economic review in this regard. It is important to note that this is not a new figure



though; there had been reports that if Pakistan doesn't implement the project, Tehran has the option to move the Paris-based International Court of Arbitration, with potential contractual liability estimated to be \$18bn. The Gas Sales Purchase Agreement (GSPA), signed in 2009 under French law, designates the Paris-based arbitration court as the forum for resolving disputes between the two nations. The court does not recognize US sanctions.

It is important to note here that there is a divergence of opinion on this matter in various policy circles and Pakistan Foreign Office has a slightly different perspective. According to media reports, the Ministry of Foreign Affairs (MoFA) in April 2024 had proposed to the Petroleum Division to move forward with the gas pipeline project without further delay, sighting it a very important energy project. There were even suggestions about the cost management also. As per cost estimates, \$158 million were to be managed from Gas Infrastructure Development Cess (GIDC) funds, and up to Rs2.5 billion were to be provided during FY 2023-24. The requirement of remaining funds amounting to Rs42.5 billion were to be managed during FY 2024-25 on approval of the GIDC Board. Pakistan Foreign Ministry spokesperson Mumtaz Zahra Baloch, earlier in March also, had commented that the project was progressing "in conformity with our commitment to the Iran-Pakistan pipeline," adding that Pakistan perceived no grounds for objections from external parties as the construction activities are confined within Pakistani territory.

This is all happening in such a hostile environment where the US is adamant in its stance on IP gas pipeline. The US has also imposed sanctions on Chinese suppliers to Pakistan's ballistic missile program, in



September 2024 followed by October 2023. The Beijing Research Institute of Automation for Machine Building Industry, the US opined, had worked with Pakistan to procure equipment for testing rocket motors for the Shaheen-3 and Ababeel systems and potentially for larger systems. Although Pakistan tried presenting a Force Majeure and Excusing Event notice to the Iranian government for being unable to carry out the project and suspend its obligations under the GSPA, Iran insists that the agreement was bilaterally signed by the two countries while Pakistan being fully cognizant of the US sanctions risk, especially when India had withdrawn from the project for the same reason in the recent past.

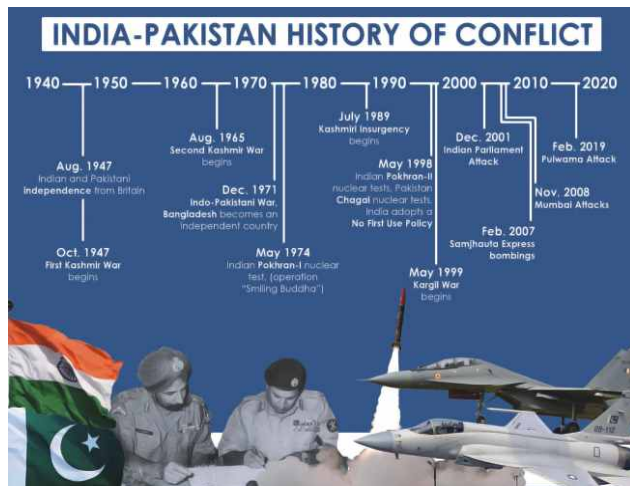
With the extension of 180-day in deadline for Pakistan expiring in September 2024, Pakistan is yet to make any significant progress in the construction of its segment of the pipeline, putting serious question on Pakistan's commitments and its seriousness about completion of this project. In addition to the security concerns in Balochistan province, the US sanctions on Iran has complicated Pakistan's regional engagement with one of its immediate neighbours especially when Pakistan is in dire of any such arrangement to fulfil energy needs of its people.

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PAKISTAN'S SECURITY DILEMMA IN ABANDONMENT AND ENTRAPMENT



SANAULLAH



Glenn Snyder, one of the most prolific scholars on alliances, suggested that a security dilemma key concern in realist analysis exists not only between potential adversaries but also between allies. This alliance security dilemma arises because states have imperfect information, rely on their own threat perceptions, and can never be completely certain of their allies' behaviour.

Consequently, states face two potential outcomes: entrapment or abandonment. Entrapment occurs when an alliance drags a state into an unwanted conflict, while abandonment leaves the state vulnerable at its moment of greatest insecurity. Pakistan's strategic foreign policy, in many ways, aligns with Snyder's analysis of the alliance system.

National security doctrines evolve gradually and are shaped by institutional factors unless disrupted by drastic events. After

its inception, Pakistan had to craft its national security and strategic objectives within the Cold War regime, facing a perceived security threat from India, primarily fuelled by the Kashmir dispute. Given its colonial legacy, Pakistan opted to join the democratic-capitalist bloc led by the United States.

Pakistan's premier, Liaqat Ali Khan, successfully presented Pakistan's case to the United States by highlighting its geo-strategic significance. This importance became crucial under the US strategic doctrine of containment following the Korean War. The newly independent Pakistan became a natural ally for the United States due to its geographic position. Its western wing was close to Central and Middle Eastern Asia, allowing for the containment of potential communist expansion towards the Indian Ocean, while its eastern wing neighboured East Asia. As a result, Pakistan and the United States signed a mutual defence assistance agreement in May 1954.

This strategic alignment led to the formation of the Southeast Asian Treaty Organisation (SEATO) in September 1954 and the Central Treaty Organisation (CENTO) in February 1955. These alliances were part of the US strategy to contain communist influence from the Middle East to the Pacific. In return, Pakistan was guaranteed military and economic assistance. However, these alliances could not fully address Pakistan's

primary security dilemma: the growing threat from India. SEATO and CENTO, ill-suited for Pakistan's regional concerns, failed to respond to India's increasingly aggressive border security policies, particularly in relation to Pakistan's eastern wing.

The situation worsened when Arab allies distanced themselves following nationalist military coups, and relations between India, the Arab states, and Western powers grew closer. Meanwhile, the Sino-Soviet split and the onset of détente in US-Soviet relations in the 1960s further complicated Pakistan's security situation. During this period, Pakistan felt abandoned by its allies. It faced Indian military aggression twice, which ultimately led to the disintegration of Pakistan's territorial sovereignty and the loss of its eastern wing, shrinking its strategic footprint to South Asia.

The experiment of integrating into collective security pacts, driven by geo-strategic considerations, proved disastrous for Pakistan's national security. Scholars have debated the causes of Pakistan's abandonment by its allies. A major factor was Pakistan's willingness to compromise on its regional and border issues. Pakistan's security dilemma was primarily driven by the Kashmir issue, which dragged it into Cold War bipolar politics.

However, it fell victim to the larger interests of the great powers. Additionally, SEATO and CENTO lacked socio-political cohesiveness, aside from their alliance with the United States. CENTO, for example, comprised Turkey, Iraq, and Pakistan, while SEATO included countries like Australia, France, New Zealand, the Philippines, Thailand, the United Kingdom, and the United States. The main aim of these alliances was to protect capitalist interests in the Middle East and the Pacific, while South Asia was not a priority.

The 1970s saw significant changes in international political and strategic affairs. Arab nationalism, led by socialist dictators, gained popularity in the Middle East, and Saudi Arabia emerged as a regional power. In Iran, the Pahlavi monarchy was replaced by a conservative religious regime following a revolution. In Asia, the United States was forced to withdraw after its defeat in the Vietnam War, while India tested its first nuclear weapon.

During this time, diplomatic relations between the US and China were also established. Pro-American regimes were overthrown in several African and South American countries. These shifts in the global order forced Pakistan to re-evaluate its strategic objectives to meet new challenges related to national security and territorial integrity. Consequently, Pakistan withdrew from SEATO and CENTO and distanced itself from Cold War bipolar politics by joining the Non-Aligned Movement. It also organised and hosted a conference of the Organisation of Islamic Countries (OIC) in Lahore, promoting the idea of an Islamic political bloc. In addition to this, Pakistan deepened its relations with China, shifting towards socio-strategic cooperation in the context of regional interests. This redefined Pakistan's foreign policy, placing it in a socio-political and geo-strategic context both regionally and globally.

However, these efforts were soon disrupted



by the Soviet invasion of Afghanistan in 1979. Pakistan's geography, long a source of both challenges and benefits, again placed it at the centre of a major conflict. The Soviet invasion became a decisive proxy war between global powers, and Pakistan found itself as a frontline state against Soviet expansion. It received significant financial and political support from anti-Soviet countries, along with billions of dollars in military aid and militant support.

This conflict, though not formalised in alliance agreements, was a circumstantial partnership driven by specific objectives. However, the war took a heavy toll on Pakistan, with the influx of millions of Afghan refugees, the rise of religious militant factions, and the burden of a prolonged dictatorial regime contributing to institutional collapse after the war. The national crisis persisted into the second phase of the Afghan conflict, labelled the "War on Terror."

In this second phase, spanning from roughly 1980 to 2021, Pakistan's security dilemma continued. None of the major powers involved showed interest in resolving Pakistan's core issue: the Kashmir dispute and securing its borders to ensure its territorial integrity. Instead, Pakistan's security vulnerabilities increased, especially after the US withdrawal from Afghanistan. Despite offering tacit support to the Taliban, relations between Pakistan and the group deteriorated after the Taliban came to power.

The earlier supportive stance turned into

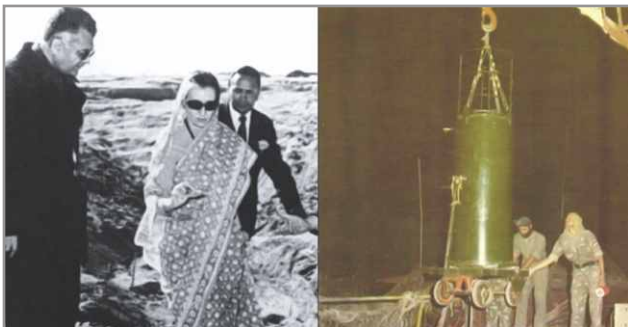


one of hostility, with diplomatic and economic pressure, as well as the growing issue of Afghan refugees in Pakistan. Meanwhile, in August 2019, India abrogated Articles 370 and 35A from its constitution, revoking the autonomy of Jammu and Kashmir. This politically charged move was met with a weak response in Pakistan's favour from the international community.

Today, Pakistan's security situation has worsened due to the rise of militant groups and ongoing threats of internal insurgencies. The country faces its worst economic crisis, a direct consequence of its entrapment in unwanted conflicts. Pakistan has been plunged into economic instability, political volatility, institutional weakness, and social uncertainty, creating a war-torn environment.

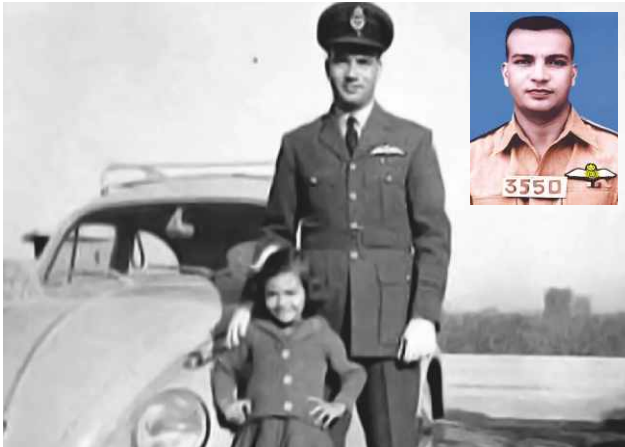
At this critical juncture, Pakistan requires a cohesive strategy that addresses both immediate security concerns and long-term stability. Merely relying on its geo-strategic significance will not be enough to achieve its national security objectives in an economic sense. Pakistan's leadership must realign its strategic partnerships in a global economic paradigm, leveraging its geography within the changing dynamics of international cooperation and mutual assistance.

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A PAKISTANI DAUGHTER ON GETTING TO KNOW IAF MIG PILOT WHO SHOT DOWN HER FATHER'S F-104

IF THIS COUNTRY WAS GOOD ENOUGH FOR YOUR FATHER TO DIE FOR, IT IS GOOD ENOUGH FOR YOU TO LIVE IN



Every year we celebrate 1965 but 1971 broke our hearts, our spirits, says Lesley Ann Middlecoat, daughter of Wing Commander Mervyn Leslie Middlecoat of PAF.

I was five in 1965 when, I remember, Daddy asking my mother Jeanne if she would like to come with him to India," Lesley Ann Middlecoat, the only child of Wing Commander Mervyn Leslie Middlecoat of the Pakistan Air Force (PAF), begins her story with a prominent memory. The depth in her big wide-set eyes, so much like her father's, Mother was immediately excited. She got dressed up, dabbed on some nice perfume and we got into our Volkswagen Beetle, only to arrive at Khem Karan, a territory captured from India by Pakistan after a terrible tank battle. It was a terrible place. It reeked of death."

Lesley recalls in vivid detail: "There were dead animals with inflated stomachs lying around. There were dead people inside tanks.

Mother was horrified. She refused to get out of the car but Daddy got out. I also reached out, my little arms extended for him to pick me up. He lifted me out of the car, despite my mother's protests, and carried me in his arms to the nearest tank. "It had a big hole on one side through which we could see two men seated inside. I tried to touch the arm of one, which just disintegrated. It turned into powder. Ash. Daddy was annoyed at me for doing that but I had questions. I asked him if they were bad men. Because in my head there were only two kinds of people good and bad. He looked at me and said, 'Les, that's someone's daddy.'

I saw a tin case lying in front of one of the two men. It had his glasses. I asked my father if I could have it. Daddy nodded and I took it. It remained with me till December 12, 1971."

That is the day Lesley's father was himself declared missing in action in another war. "I was now 11. Daddy would call us after every mission. He called us on December 10, he called us on December 11. He asked Mother to come to Karachi because we were in Peshawar then. She was about to ask him, the next time he called, to make arrangements for us to come to Karachi. But there was no call on the third day. And we knew. Another child's daddy was gone. That day I took out that tin case with the glasses and buried it in our lawn."

Lesley's childhood memories are aflood with little things, significant things, snippets, conversations, chiding a crash course on life

that she has held on to all these years. One memory is from a wintry morning in the mid-1960s. A formation of two F-104 Starfighters, the pride of the PAF, roared across the mountainous landscape of the PAF firing range near Peshawar, hugging the terrain at a mere 100 feet. Lesley sat among the air show audience who watched in awe as the silver aircraft approaching the stands suddenly went silent, followed by a deafening boom, a few seconds later, as the aircraft crossed the sound barrier, shaking the audience out of their seats.

They turned around at a low altitude and came past the stands again, as the audience held their breath expecting another boom. But this time, the lead aircraft rolled upside down while still in formation and then performed a loop to come back past the stands. The pilot, then Squadron Leader Mervyn Middlecoat, commanding the elite No. 9 Squadron, then performed a dazzling display of low-level aerobatics, ending with his signature vertical rolling climb till he disappeared from sight into the blue sky. "Of all the aircrafts that he loved to fly, the F-104 was Daddy's absolute favourite. To me it looked like a rocket," says Lesley.

The F-104 inside the PAF Museum is, in fact, the very plane that Middlecoat would fly. By then a Wing Commander, he was on a training assignment with the Royal Jordanian Air Force when war broke out on December 3, 1971. He requested for his return, to report for duty in Karachi and volunteered for a mission to attack the Indian air base at Jamnagar. He flew his first mission the very day of his return on December 10. After, he called his family at maghrib. They were allowed three-minute phone calls once a day. He flew again the next day, and called them again. "I told him I was praying for him and his squadron," recalls



Lesley. "I wanted him to return. I told him this over the phone and he said to me to pray for Pakistan." The third day, he didn't call on his regular time. When Jeanne called up Masroor Base she was informed that his aircraft had been shot down somewhere over the Indian Ocean.

"Hope is intoxicating," Lesley says. "It has a life of its own. It keeps you going. It kept my mother and me going. She would say to me 'Les, if there is any possibility of coming back, he would come back.'" For years, Middlecoat's wife and daughter held on to the hope that he might come back. "My mother was a volunteer for the Red Cross," explains Lesley. "We would go together to the Wagah border whenever there were prisoners of war [POWs] coming back. There were 83,000 POWs in 1971. There used to be a list and Daddy's name would not be on it. Still we would go. Because what if he had had a head injury and had forgotten his name? Also, the Indians would not always give complete or correct names of the POWs.

"I was studying in Murree then. Mother would call from Peshawar, telling me to get ready. She would drive all the way from there to Murree, pick me up and then drive all the way to Lahore. Each time I was excited. There was fresh hope. We would sit there watching

the uncles coming back. Some even looked like Daddy but..."

The daughter remembers her father as a pleasant, uncomplicated person. "He would laugh easily. He would laugh so much that there would be tears forming in his eyes. Being an only child, I got the undivided attention of both my parents. But I was closer to him. He would talk to me and I absorbed every word he said. He would make us stand up for the national anthem. I was taught to march before I could run. I was taught how to salute. Daddy was decorated with the military award of Sitara-i-Jurat in 1965 and he was awarded another of the same posthumously for 1971. He is the only PAF pilot who got the declaration in two wars. Between the wars, he also got the highest peacetime award, a Sitara-i-Basalat. He is the only person to have been awarded three gallantry awards in Pakistan's history. But he never got around to receiving the Sitara-i-Basalat in person. He didn't care for honours and awards. Being a fighter pilot for the PAF was the greatest honour for him. 'Imagine being paid to do something one is willing to do for free,' he would say to my mother," Lesley says.

His name is printed right at the very top of the list of martyred fighter pilots in 1971 at the



PAF Museum gallery in Karachi. "Because he is the senior-most of all fighter pilots who laid down their lives ever for the land," says the daughter.

"He named me after himself, something that my mother never forgave him for. He had been sitting outside the delivery room soon after my arrival into the world. Fathers were not welcome in the delivery room in those days. While filling out the hospital forms, he gave me his middle name. And when my mother came to, she felt cheated. She wanted her name also somewhere in there," the deep eyes are smiling now. It is a happy memory, one that the daughter had been told often while growing up.

Lesley learnt the word 'martyr' before she could understand its meaning. "I was learning counting. I counted aircrafts when they flew off on missions. I counted them when they returned. Sometimes they wouldn't add up on their return. I remember every uncle we lost in the 1965 war. We were at Sargodha Base then. There was Uncle 'Butch' Ahmed, Daddy's best friend and the senior-most pilot whom we lost in 1965, there was Uncle Sarfaraz Rafiqui, there was 'Pa' Munir." Those eyes are smiling again at the mention of Pa Munir. Lesley does not remember his full name, only what everyone lovingly referred to him as. "Pa means big brother in Punjabi. He was older than the others. But he loved to fly and hated having a desk job so they let him fly even though he stuttered. By the time he could complete a sentence asking permission for takeoff, they would have already given it to him," she laughs through the tears.

"The night he [Pa Munir] went missing in 1965, I remember all the mothers gathered at his place, crying, as the children gathered in the lawn to play. He was a 'shaheed' [martyr]. We knew being shaheed was a great honour.

We just didn't know how final it was, that it meant you were not coming back. The same scenes I remember after Uncle Sarfaraz Rafiqui and all the others whom we lost in that war. We talk about them often. But we rarely speak about our losses of 1971. Unlike 1965, 1971 is a sore topic. Every year we celebrate 1965 but 1971 broke our hearts, our spirits.

"I am Christian but I used to get a new Eid jorra and pretty bangles, etc., every year. Then one day I asked why we didn't get visitors too on Eid. Daddy took me out and asked me to point to any house. I pointed to homes we had not been to before and he accompanied me there as he told the folks there that his daughter was feeling lonely on Eid. We were welcomed wholeheartedly at any house, at any air base, on Eid and that's how he taught me that the PAF was my family. I still feel that way. "I remember all his mates making sure that I was alright after he was gone. They were all very kind to me. One of them, Khaqan Abbasi Uncle, who taught Daddy how to fly the F-86 Saber and who years later was instructed by Daddy how to fly the F-104 Starfighter, would take me for plane rides soon after Daddy's shahadat [martyrdom]. When I'd ask why his children were not coming up with us, he would dismiss it by saying that their father was not a shaheed. But mine was. Therefore, I deserved special treatment.

"I remember saying to Daddy once that I hated India. All us children growing up at air bases used to say such things. But he chided me about it. He said, 'In life you do things out of love. Love is powerful. Hating my enemy won't help me but loving my country will. I want my country to prosper.' And I understood." After her mother's passing in 2011, Lesley found the Indian pilot who had shot her father's plane down. There is no hate, no anger in her heart. But there is understanding.

"When Daddy went MIA [Missing In Action], we didn't know what could have happened to him though we thought about it often," Lesley says. "We only had the name of the Indian pilot who had shot his plane down, Flight Lt Bharat Bhushan Soni." "One day, I saw a message on Facebook from someone named Arjun asking me if I was Wing Commander Middlecoat's daughter. From the name, I could tell that he was Indian. I didn't reply. But he messaged again saying that he is the son of an Indian Air Force officer and he knew about my father, that he had found me on his friend Ishrat Aurangzeb's friends' list.

"Ishrat is Gen Ayub Khan's granddaughter. She studied with me at the Convent school in Murree. I reached out to her to ask about Arjun and she told me that he was harmless. His father was an air attaché based in Islamabad and he has lived here for four to five years. Ishrat said that, as a child, he was friends with her younger brothers. "Getting to know Arjun slightly better, I asked him a favour, to put me in touch with Soni. Arjun then asked his own father to put the two of us in touch

"I wrote a long letter to Soni, attaching photos of Daddy, my parents' on their wedding day, of me with Daddy, asking for just a bit of his time to tell me about my father's end. He messaged back saying that he had read my letter several times. He requested some time as he said he felt choked with emotion, overwhelmed. He had never thought that he would be corresponding with Wing Commander Middlecoat's daughter, who would address him so respectfully. "Soni told me that he and his squadron commander had come to Jamnagar from another air base in their MiGs as the Indian aircraft at Jamnagar were unable to take off while under attack from the Pakistani F-104s. These two Indian pilots had come to intercept the Pakistani

aircraft. They took their positions on both sides of a lone F-104. "The F-104 has a big turning radius, which they knew about. They didn't allow it to turn as they fired at it constantly. One rocket hit the aircraft's tail and the pilot ejected. Soni requested to take a round to see where he was going to land but was ordered to return to base as they had the coordinates for the Indian Navy to pick him up. But by the time the Indian Navy reached there, it was too late. There was no sign of the Pakistani pilot. It is said that there is this five-mile radius of shark-infested waters in the Indian Ocean and Daddy had landed right in the middle of it," she sighs. After giving her the last piece to complete the picture of her father's memory, Soni and Lesley continued their correspondence. They have formed a unique friendship over the years. "He tells me now

that he shares a bond with me that he can't even say he shares with his own children. I also understand that he was doing his duty just like my father was doing his. Daddy used to tell me that when flying, he only thought about the altitude of his plane and how much he loves his country." This year, Soni is being honoured in India along with their other military heroes to celebrate India's victory of 50 years ago. Lesley herself is a mature woman now. She has a fine career in human resources. Sometime ago she was also offered to go abroad for work for two years. "I was happy. But when I told my mother about it, she wasn't. She said that if I left, I may not come back. 'If this country was good enough for your father to die for, it is good enough for you to live in', she said to me. The next morning I thanked my company for the offer but declined it," she says.

Continued from page 32

NILOP

In the medical field, NILOP has designed and developed laser-based systems for Photodynamic Therapy (PDT), which have been effectively used in the treatment of skin cancer. Such innovations highlight NILOP's dedication to applying research outcomes for societal benefit and economic development. NILOP's organizational structure comprises several specialized divisions focusing on distinct research areas. These include the Spectroscopy Division, the Material Division, the Optronics Division, the Agriculture and Biophotonics Division, and the Laser Development Division. Each division has multiple groups that delve into specific topics, such as atomic spectroscopy, nano-energy science, laser cooling and trapping of atoms, and ultrashort-pulse lasers. A Technical Services Division provides essential support for research and development activities.

Through national and international collaborations, NILOP has elevated its research capabilities and stature. It trains numerous interns from universities and R&D organizations annually, offering hands-on experience in lasers, optoelectronics, and materials science. By continually expanding its research scope and developing cutting-edge technologies, NILOP remains at the forefront of scientific innovation in Pakistan, fostering a new generation of skilled researchers and professionals while contributing to the nation's technological advancement. In essence, NILOP is more than just a research institute; it is a dynamic scientific community dedicated to exploring the potential of laser and optoelectronic technologies. With its focus on excellence in research, education, and innovation, NILOP is a valuable asset to Pakistan's scientific ecosystem, paving the way for future scientific breakthroughs.

The author is Research Officer at Rabita Forum International (RFI) and Associate Editor of Monthly Interaction.



1965 ششہ ماہانہ DEFENCE DAY

Pakistan celebrates 6th September as Defence Day, a tribute to the valor of its forces and people who, with unwavering unity, turned back India's cruel aggression. Their bravery shattered the enemy's dark and malicious ambitions, leaving them in ruin.



Interaction



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